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1 Introduction to Annotation Guidelines

We are building off the BBN Named Entity corpus, which includes three subtasks: entity names, temporal expressions and number expressions (SGML tag elements: ENAMEX, **TIMEX** & **NUMEX**). These are further divided into a number of types, and we extend these as detailed below.

1.1 General Principles:

We want the structure to stay the same unless there is genuine ambiguity. When the **University of Sydney** is forced to be flat **ORG**, it forces ambiguity onto **Sydney**. Our approach to this metonymy: we're marking up all of the layers, and you have to have the base layers in there. If there is genuine ambiguity, ie, between **PER Sydney**, then this should be present.

NER has taken the simplistic position of flattening all the layers and creating false ambiguity. Whilst the motivations for this are clear - a nested annotation structure is substantially harder to annotate, we nevertheless consider it an important task, worthy of the required considerable annotation effort.

2 Organisations

Organisations are defined by their having an established organised structure of employees.

Various different kinds of organisations exist, including corporate, educational and political organisations. Within the names of these organisations, we find embedded nested entities.

Overview of `org` Organisations have interesting structures, often including embedded references to people and locations, as well as having structural elements denoting specific legal organisational meanings (‘Pty Ltd.’, ‘Corp.’ etc.), which are not in the underlying BBN annotations, since those guidelines only annotate NENTS as flat entities.

The main embedded annotations in organisations are `PER` entities using `NAME` (see Section 2.15) and `LOC` entities.

1. Commonwealth Edison

`NAME`

`ORGCORP`
2. New York Stock Exchange

`CITY`

`ORGCORP`

We mark cases of parent-subsidiary organisations using nested `ORG` tags.

General Motors	Acceptance	Corp.
<code>ORGCORP</code>		<code>JARGON</code>
<code>ORGCORP</code>		

Some organisations have not only an organisational structure but also a physical location tightly associated with the organisation. For instance, museums are primarily organisations, but are also often highly associated with a particular location or building. We use the `FACILITY` tag to cover entities such as these, that combine both `ORG` and `LOC` aspects. See Section 3 for more detail.

Note that we annotate all named references to organisations. Adjectival forms of organisation names are also included as `ORGCORP` : ‘Congressional’ efforts, etc.

2.1 orgcorp

Corporate organisations: companies authorised to act as a single entity. Big Board, boards of private organizations, casinos, divisions of private organizations, private organizations, shops, stock exchanges, sometimes ventures

Corporations can be simple flat structures, including multi-word entities, and their abbreviated forms.

Tandem	IBM	Delta Air Lines
<u>ORGCORP</u>	<u>ORGCORP</u>	<u>ORGCORP</u>

Corporation names frequently refer to their founders; these nested names are marked with the **NAME** tag. (See Section 2.15.3 for more details on **NAME** .) They also frequently include **JARGON** words.

Monsanto	Boeing	Co.
<u>NAME</u>	<u>NAME</u>	<u>JARGON</u>
<u>ORGCORP</u>	<u>ORGCORP</u>	

Organisations frequently have embedded references to locations, including **CITY** and **COUNTRY** , and **NATIONALITY** . (See section 4.)

Bank of Tokyo	American Airlines	America West Airlines
<u>CITY</u>	<u>NATIONALITY</u>	<u>COUNTRY</u>
<u>ORGCORP</u>	<u>ORGCORP</u>	<u>ORGCORP</u>

Organisations can also include references to other organisations, as occurs frequently in the case of parent-subsidaries.

General Motors	Acceptance Corp.
<u>ORGCORP</u>	<u>JARGON</u>
<u>ORGCORP</u>	

2.1.1 Edge Cases for orgcorp

In some instances, it is not immediately apparent whether or not a token span refers to an embedded entity. In the following case, ‘English China Clays’ was a Cornwall-based mining company involved in the extraction of china clay, matching the structure on the left, and not a corporation which perhaps had its roots in trading clay between England and China, which would match the structure on the right.

English	China	Clays	PLC		English	China	Clays	PLC
<u>NATIONALITY</u>			<u>JARGON</u>	*	<u>NATIONALITY</u>	<u>COUNTRY</u>		<u>JARGON</u>
	<u>ORGCORP</u>					<u>ORGCORP</u>		

A similar case is **Commonwealth Edison**, where it is not immediately clear whether or not ‘Commonwealth’ is referring to a **LOC** such as ‘**The Commonwealth of Nations**’ or the common noun concept of the general good.

In these cases, where it is not clear without substantial research, we assume that the common noun meaning is intended, and do not annotate further structure.

Commonwealth	Edison		*	Commonwealth	Edison
	<u>NAME</u>			<u>LOC</u>	<u>NAME</u>
<u>ORGCORP</u>				<u>ORGCORP</u>	

Edge cases are resolved at the annotator’s discretion after consulting other structural patterns found in the corpus. We can not allow for extensive research for each ambiguous entity.

2.2 org:edu

Schools, universities and other educational organisations have very common naming conventions, which we refer to as ‘templates’. Annotating **ORG:EDU** as a separate type of **ORG** lets us identify these template patterns.

University of <u>LOC</u>	<u>LOC</u> University	<u>NAME</u> University
<u>LOC</u>	<u>LOC</u>	<u>NAME</u>
<u>ORG:EDU</u>	<u>ORG:EDU</u>	<u>ORG:EDU</u>
University of Miami	Boston University	Harvard University
<u>CITY</u>	<u>CITY</u>	<u>NAME</u>
<u>ORG:EDU</u>	<u>ORG:EDU</u>	<u>ORG:EDU</u>

Universities, as large educational organisations, frequently have smaller educational organisations within them, such as schools and faculties, and this structure is reflected in the structure of the entity itself.

University of Virginia Law School
STATE
ORG:EDU
ORG:EDU

2.3 org:political

The names of political parties:

Communist Party
NORP:POLITICAL
ORG:POLITICAL

African National Congress
NORP:OTHER
ORG:POLITICAL

Khmer Rouge
NORP:OTHER
ORG:POLITICAL

Christian Democratic Union
RELIGION NORP:POLITICAL
ORG:POLITICAL

BBN classified the [Palestinian Olympic Committee](#) as a [ORG:POLITICAL](#) , though it is not clear that this is the best classification. Here, there is a substantial overlap with [GOVERNMENT](#) , and we may eventually merge these two categories.

Palestinian Olympic Committee
NORP:OTHER
ORG:POLITICAL

* Palestinian Olympic Committee
NORP:OTHER
GOVERNMENT

Add
discussion

Distinction between political parties and **norp:political**

2.4 hotel

The name of a hotel, hostel, or other accommodation provider.

Grand Kempinski
NAME
HOTEL

Hyatt Regency
NAME
HOTEL

Vagabond Hotels
HOTEL

2.5 org:religious

The names of churches, mosques and other places of worship, as distinct from the adjectival form of these religious organisations, e.g. ‘Christian’, ‘Muslim’ which are marked as **RELIGION** (see Section 6.3).

Unification Church	Church of England	St. Mary 's Church
<u>ORG:RELIGIOUS</u>	<u>COUNTRY</u>	<u>HON</u> <u>FIRST</u>
	<u>ORG:RELIGIOUS</u>	<u>NAME</u>
		<u>ORG:RELIGIOUS</u>

2.6 org:other

This category includes other organisations that are not otherwise specified, including: libraries, unions, environmental agencies, professional associations, health associations.

It also includes organisations that sit at a higher level than **GOVERNMENT**, such as the ‘UN’ or ‘European Commission’.

U.N.	National Association of Antique Dealers
<u>ORG:OTHER</u>	<u>ORG:OTHER</u>
UNESCO	
<u>ORG:OTHER</u>	
Red Cross	U.S. Cycling Federation
<u>ORG:OTHER</u>	<u>NATIONALITY</u>
	<u>ORG:OTHER</u>
Semiconductor Industry Association	
<u>ORG:OTHER</u>	
Royal Shakespeare Company	Writers Guild of America East
<u>NAME</u>	<u>COUNTRY</u>
<u>ORG:OTHER</u>	<u>ORG:OTHER</u>

2.7 government

These are organisational units within countries. Non-generic governmental entity names such as “Congress” or “Chamber of Deputies”. Also mark up entities that are government controlled, such as NASA

A simple test for **GOVERNMENT** is whether the entity has a URL ending in “.gov”.

Treasury Department	State Commission on Judicial Conduct
<u>GOVERNMENT</u>	<u>GOVERNMENT</u>
South Australian Treasury	White House Office of Management and Budget
<u>NORP:OTHER</u>	<u>BUILDING</u>
<u>GOVERNMENT</u>	<u>GOVERNMENT</u>
	<u>GOVERNMENT</u>

Lower-case mentions of governments should not be annotated.

* parliament
GOVERNMENT

2.7.1 **government** edge cases

Secretary of State: In the phrase ‘Secretary of State’, what exactly ‘State’ is referring to is ambiguous, (could be the United States, or individual states, such as Oregon). Although the word ‘State’ is referring to a **GOVERNMENT** entity, it is acting as a common noun, since we cannot in isolation identify what entity it is actually referencing. As such, unless we have explicitly which country’s government is being referred to, we do not mark up ‘State’ as **GOVERNMENT** inside **ROLE**.

Secretary of State Baker	
<u>ROLE</u>	<u>NAME</u>
<u>ROLE</u>	<u>PER</u>
<u>PER</u>	
U.S. Secretary of State Nicholas Brady	
<u>NATIONALITY</u>	<u>ROLE</u>
<u>GOVERNMENT</u>	<u>FIRST</u> <u>NAME</u>
<u>ROLE</u>	<u>PER</u>
<u>ROLE</u>	
<u>PER</u>	

Government owned independent corporations should also be included in **GOVERNMENT**.

Tennessee Valley Authority
STATE
REGION
GOVERNMENT

Administrations: We do not annotate references to specific administrations as **GOVERNMENT** if the token is lower case, marking instead only the **PER**:

Bush administration
NAME
PER

Governments and Political Organisations: Note that a **GOVERNMENT** is different from an **ORG:POLITICAL** as an **ORG:POLITICAL** is the name of a specific political party, such as the Democrats or the Greens.

2.8 army

The names of any military (including army, navy, airforce etc) unit. These should be annotated with full structure of **LOC**, **NATIONALITY** etc.

Air Force <u>ARMY</u>	Navy <u>ARMY</u>	U.S. Air Force <u>NATIONALITY</u> <u>ARMY</u>
--------------------------	---------------------	---

2.9 hospital

The name of a hospital, health clinic, or medical facility of any sort. These should be annotated with full structure of **LOC**, **NAME** etc.

Massachusetts General Hospital <u>STATE</u> <u>HOSPITAL</u>	New York University Medical Center <u>STATE</u> <u>ORG:EDU</u> <u>HOSPITAL</u>
---	---

new Note that **HOSPITAL** entities can be considered to be a more specific type of **ORGCORP**, and so can also contain **JARGON** etc, since they can be either public or private institutions.

St. Joseph 's Hospital Inc.
HON FIRST JARGON
 NAME
 HOSPITAL



2.10 museum

The name of a museum, gallery etc.

Asian Art Museum <u>NORP:OTHER</u> MUSEUM	Smithsonian Institute <u>NORP:OTHER</u> MUSEUM
Leipzig Museum of Fine Arts <u>CITY</u> MUSEUM	Princeton Art Museum <u>GPE</u> <u>ORG:EDU</u> MUSEUM

2.11 band

The name of a musical group. Note: when referring to individual artists, eg: 'Jimi Hendrix', these entities should be marked as **PER**.

Beatles <u>BAND</u>	Pet Shop Boys <u>BAND</u>
------------------------	------------------------------

2.12 sports-team

Mentions of a sports team. Several sports team names tend to be composed of a **CITY** (or other location) and team name, either of which can be dropped in certain contexts.

Sports team entities should be marked up with embedded entities, most frequent of which are **CITY** and other **LOC** entities.

San Francisco Giants <u>CITY</u> SPORTS-TEAM	Giants SPORTS-TEAM
--	-----------------------

Toronto Blue Jays
CITY
SPORTS-TEAM

Toronto
CITY
SPORTS-TEAM

Note in the above examples, ‘Toronto’, as well as making up part of the ‘Toronto Blue Jays’ is also used as a stand-alone mention of a SPORTS-TEAM .

2.13 media

new

The MEDIA tag covers entities that are news sources such as newspapers and broadcasters, for which the distinction between the product and the company is often particularly difficult to identify.

Organisations that write or run a particular newspaper are frequently named after that newspaper, and similar situations are common for other media providers such as radio stations or TV channels. Further, the distinctions between products and the opinions of people producing those products (which should be treated as the organisation itself) are even harder to separate, as publications often function agentively as organisations.

To capture this ambiguity, we mark instances up as MEDIA. This tag does not attempt to resolve the entity in question to either the physical product (for example, a physical copy of a newspaper, or a radio station) or the organisation to which it could refer.

3. the Journal asked ... a random sample of business owners
MEDIA

4.
several industry analysts told the Professional Investor Report they believed
MEDIA

We can further use nested structures to identify instances where a MEDIA entity is completely unambiguously referring to the organisation which runs it. For instance, when a MEDIA entity is referred to in the same way as other ORGCORP entities are, such as when discussing the finances of the company, or a recent board election we can nest the MEDIA tag inside a larger ORGCORP span:

5.

said Robert F. Erburu , Times Mirror 's chairman and chief executive

<u>FIRST</u>	<u>INI</u>	<u>NAME</u>	<u>MEDIA</u>
<u>PER</u>			<u>ORGCORP</u>

6. former CBS News President

<u>MEDIA</u>
<u>ORGCORP</u>

That is, **MEDIA** entities should only be nested in **ORGCORP** spans when they are being reported on just as any other company would be reporting on. In the following example, the two entities refer to **ORGCORP** and **MEDIA** respectively, evident from their contexts:

7.

American Health Partners , publisher of	American Health magazine ,
<u>NATIONALITY</u>	<u>NATIONALITY</u>
<u>MEDIA</u>	<u>MEDIA</u>
<u>ORGCORP</u>	

is deep in debt

Note that **MEDIA** also covers journals, magazines and other similar entities. Also include sections of **MEDIA** as **MEDIA**, such as 'Good Weekend' or 'Metro'.

media extended example Take the following sentence: "And **Time Warner Inc.** is developing a spinoff of **Time** magazine aimed at kids , on the heels of its successful **Sports Illustrated for Kids** ." (Sentence Section 12, Article 64, Sentence 6)

The entities (marked in bold) should be annotated as follows:

Time Warner Inc.	Time	Sports Illustrated for Kids
<u>MEDIA</u> <u>NAME</u> <u>JARGON</u>	<u>MEDIA</u>	
<u>ORGCORP</u>		<u>MEDIA</u>



2.14 jargon

The intention of marking up **JARGON** is to help co-reference resolution. Corporate modifiers, such as 'Corp.', 'Co.' 'LTD.', etc simply modify the name of the

organisation, and are not always used. Thus, it is useful to signify that ‘Fujitsu Ltd’ is referring to the same entity as ‘Fujitsu’.

Corp Jargon tokens are most frequently: ‘Co.’, ‘Corp’, ‘Corp.’, ‘Inc.’, ‘Ltd’, ‘Ltd.’, ‘Co’, ‘PLC’, ‘N.V.’, ‘S.p.A.’, ‘L.P.’, ‘Inc’, ‘Inc.’, ‘AG’

Since we are annotating **NAME** within **ORGS**, the distinction between **JARGON** and words that are not a **NAME** becomes more important.

Eg., when analysing entities such as

Hughes Aircraft	Co.
<u>NAME</u>	<u>JARGON</u>
<u>ORGCORP</u>	

it may be useful to have individual potential alias spans of ‘Hughes’, ‘Huges Aircraft’ and ‘Hughes Aircraft Co.’ However, adding embedded **ORGCORP** spans within an **ORGCORP** , as in this derivation:

*	Hughes Aircraft	Co.
	<u>NAME</u>	<u>JARGON</u>
	<u>ORGCORP</u>	
	<u>ORGCORP</u>	

would also imply there is an embedded company reference, which there isn’t. Thus, we resolve only to add internal **ORGCORP** when a separate entity is being referenced, not denoting potential alias spans.

Other tokens such as ‘Institute’, ‘Group’ and ‘Estate’ may seem on first glance to fit into the **JARGON** category since they describe organisational structure in some way. However, if ‘Institute’ were to be marked up as **JARGON** within the entity ‘National Cancer Institute’, it would imply that ‘National Cancer’ would make a standard variation on the name, which is not the case.

2.15 name

We use **NAME** to mark internal structure and nested references to entities that behave as references to people.

Common types of **NAME** :

- family names: Edison, Gates, Foley, Babcock, Brown

- Specific references to people in an organisation name: Bill and Melinda Gates Foundation, Thomas Edison Corp.

Chrysler	Corp.	Bill	and	Melinda	Gates	Foundation
<u>NAME</u>	<u>JARGON</u>	<u>FIRST</u>		<u>FIRST</u>	<u>NAME</u>	
<u>ORGCORP</u>		<u>Φ</u>				
		<u>FIRST</u>				
		<u>NAME</u>				
		<u>ORGCORP</u>				

NAME is discussed in more detail below, and with reference to **PER** entities in Section 5.4.

2.15.1 Further **name** discussion

Ideally, we would be able to mark up all embedded references to entities, that is, mark up **Walt Disney** as a **PER** within the **ORG** entity **Walt Disney Corp.** This is, however, sometimes not feasible.

In some cases, it is not immediately clear what type an embedded entity is without requiring substantial research. We can identify **Walt Disney** as a person easily, due to his fame.

Familiarity with an organisation does not always ensure an embedded entity's type is widely known, however. Compare **R.P. Scherer Co.**, **Boeing Corp.**, **Alleghany Corp.** and **Univest Corp.**. Here, **R.P. Scherer Co.** is clearly recognisable as the name of a person, in this case **Robert Pauli Scherer**, the company's founder. In the organisation **Boeing Corp.**, the name 'Boeing' also refers to its founder, **William E. Boeing**.

The organisation **Alleghany Corp.** could seemingly have been named after a founder, but was founded by railroad entrepreneurs Oris and Mantis Van Sweringen. The name, seemingly, is not a reference to a specific entity, but simply a chosen name. In the case of **Univest Corp.**, it seems clearer that the company name does not refer to a person, but instead has to do, perhaps, with banking or investment. Indeed, Univest Corporation is an American corporation offering banking, insurance and investments.

Thus, it is not always clear which elements of an organisation name refer to other embedded entities, and without substantial research into each individual organisation, many of which no longer exist, it is not possible to accurately determine these.

For example, consider ‘Boeing Co.’. If we knew with certainty that this company was named for a person with the last name ‘Boeing’, we may want to annotate the company in the following way:

$$\begin{array}{c} * \quad \text{Boeing} \quad \text{Co.} \\ \hline \text{NAME} \quad \text{JARGON} \\ \hline \text{PER} \\ \hline \text{ORGCORP} \end{array}$$

However, we cannot determine this with great certainty for many companies, and certainly not without a prohibitive amount of research.

Other elements of an embedded entity are, however, easier to distinguish, including initials and first names.

We take the strategy of marking up all mentions that seem to be reasonably likely to be references to people, marking each likely reference as **NAME**, with additional structural layers added as necessary for first names and initials.

$$\begin{array}{c} \text{Boeing} \quad \text{Co.} \\ \hline \text{NAME} \quad \text{JARGON} \\ \hline \text{ORGCORP} \end{array}$$

The largest span that refers to the same entity should be marked as a single **NAME**. If it is not clear whether an embedded reference is referring to one or more entities, we err on the side of caution, marking them as separate entities.

$$\begin{array}{c} \text{Mary} \quad \text{Washington} \quad \text{College} \\ \hline \text{FIRST} \quad \text{NAME} \\ \hline \text{NAME} \\ \hline \text{ORG:EDU} \end{array} \qquad \begin{array}{c} \text{R. P. Scherer} \quad \text{Co.} \\ \hline \text{INI} \quad \text{NAME} \quad \text{JARGON} \\ \hline \text{NAME} \\ \hline \text{ORGCORP} \end{array}$$

$$\begin{array}{c} \text{T. Rowe Price Associates} \quad \text{Inc.} \\ \hline \text{INI} \quad \text{MIDDLE} \quad \text{NAME} \quad \text{JARGON} \\ \hline \text{NAME} \\ \hline \text{ORGCORP} \end{array}$$

In this way, we can build up standardised structures in organisation names. Consider that the following entities all have structure **NAME** + **JARGON** → **ORGCORP**:

R. P. Scherer	Co.
<u>INI</u>	<u>NAME</u> <u>JARGON</u>
<u>NAME</u>	
<u>ORGCORP</u>	

Rothschild	Inc.
<u>NAME</u>	<u>JARGON</u>
<u>ORGCORP</u>	

Chrysler	Corp.
<u>NAME</u>	<u>JARGON</u>
<u>ORGCORP</u>	

Westinghouse	Electric	Corp.
<u>NAME</u>		<u>JARGON</u>
<u>ORGCORP</u>		

We can expand on these regular patterns in the structure of entities by introducing the concept of syntactic coordination into our analysis.

Johnson	&	Johnson	Corp.
<u>NAME</u>		<u>NAME</u>	<u>JARGON</u>
<u>NAME</u>		Φ	
<u>ORGCORP</u>			

Here, the ‘&’ is acting as a combinator (marked in the derivation as Φ), combining the two names ‘Johnson’ and ‘Johnson’ to act as a single name.

Company names often go through substantial changes as companies grow and merge. For example, the [Goldman Corp.](#) merged with [Sachs Co.](#) to produce [Goldman and Sachs Co.](#), now better known as [Goldman Sachs Co.](#)

Even in the final [Goldman Sachs Co.](#), an elided combinator is being used to combine the two originally separate company names into one [NAME](#) span. Thus, the structural pattern of [NAME](#) + [JARGON](#) \rightarrow [ORGCORP](#) still holds.

Goldman	and	Sachs	Co.
<u>NAME</u>		<u>NAME</u>	<u>JARGON</u>
<u>NAME</u>		Φ	
<u>ORGCORP</u>			

Goldman	Sachs	Co.
<u>NAME</u>	<u>NAME</u>	<u>JARGON</u>
<u>NAME</u>		Φ
<u>ORGCORP</u>		

Similarly, mark up three plus coordinated entities like this:

Goldman	,	Sachs	and	Smith	Co.
<u>NAME</u>		<u>NAME</u>		<u>NAME</u>	<u>JARGON</u>
<u>NAME</u>			Φ		
<u>ORGCORP</u>					

By annotating embedded structures inside [NAME](#), we can also coordinate on other elements inside the name. For instance:

Bill	and	Melinda	Gates	Foundation
<u>FIRST</u>		<u>FIRST</u>	<u>NAME</u>	
<u>FIRST</u>			Φ	
<u>NAME</u>				
<u>ORGCORP</u>				

2.15.2 Company history through name coordinations

Through the merging of companies, organisation names often grow quite complicated. Take the finance company [Morgan Stanley Smith Barney](#) as an example. [Charles D. Barney & Co.](#) and [Edward B. Smith & Co.](#), both named after their founders, merged in 1938 to form [Smith Barney & Co.](#)

[Smith Barney, Harris Upham & Co.](#) was, formed in 1975 when [Smith Barney](#) merged with [Harris, Upham & Co.](#). The company continued to acquire other businesses, including [Shearson](#), and for a time was known as [Travelers Group Inc.](#), although some part of the business continued to operate under the [Smith Barney](#) brand. In 1997, [Travelers](#) acquired [Saloman Inc.](#), creating [Salomon Smith Barney](#), before selling to [Morgan Stanley](#), to become [Morgan Stanley Smith Barney](#). Thus, in some cases, the surface structure of an organisation often represents part of its history.

We take the following as a starting point, including the [NAME](#) of the founders of the now merged companies.

Smith	Barney	,	Harris	Upham	&	Co.
<u>NAME</u>	<u>NAME</u>		<u>NAME</u>	<u>NAME</u>		<u>JARGON</u>
<u>ORGCORP</u>						

We also consider the [NAME](#) coordination between ‘Smith’ and ‘Barney’, and ‘Harris’ and ‘Upham’ from a syntactic perspective, respecting the comma boundaries, and coordinate to the following structure.

Smith	Barney	,	Harris	Upham	&	Co.
<u>NAME</u>	<u>NAME</u>		<u>NAME</u>	<u>NAME</u>		<u>JARGON</u>
<u>NAME</u>			<u>NAME</u>			
<u>ORGCORP</u>						

These comma boundaries often act as hints of the historical structure of the company.

We then coordinate over the comma to join the distinct [NAME](#) labels:

Smith	Barney	,	Harris	Upham	&	Co.
<u>NAME</u>	<u>NAME</u>		<u>NAME</u>	<u>NAME</u>		<u>JARGON</u>
<u>NAME</u>			<u>NAME</u>			
<u>NAME</u>						
<u>ORGCORP</u>						

This structure now adheres to the standard template of `NAME + JARGON → ORGCORP`.

Note that when there is no interrupting punctuation, `NAME` layers should be coordinated to larger `NAME` spans.

SmithKline	Beecham	PLC
NAME	NAME	JARGON
NAME		
ORGCORP		

Commas in **NAME** often designate historical mergers and acquisitions, and this structure is reflected our bracketing. However, commas are unreliable, and are often removed, especially as the name of an organisation becomes more widely known.

Where commas exist, we trust that bracketing. In sentences that do not have commas, we do not guess at or look up structure.

Lord	Day	&	Lord	Barrett	Smith
<u>NAME</u>	<u>NAME</u>		<u>NAME</u>	<u>NAME</u>	<u>NAME</u>
NAME			NAME		
NAME					
ORGCORP					

2.15.3 Why **name** and not **last** ?

To avoid marking up names that are not surnames as **LAST** , but also avoid enormous effort researching every organisation named in the corpus, we considered a number of options. We use **NAME** as an underspecified and general tag, which when contextualised, can take on a more specific meaning.

For our analysis, we want to have as much of the same structure as possible for each word. That is, that ‘Smith’ should be marked consistently wherever it appears, just as ‘Melbourne’ is consistently marked as a **CITY**.

Melbourne	University of Melbourne	Melbourne Knights FC
<u>CITY</u>	<u>CITY</u>	<u>CITY</u>
	<u>ORG:EDU</u>	<u>SPORTS-TEAM</u>
Mr Smith		Smith Family
<u>HON</u> <u>NAME</u>		<u>NAME</u>
<u>PER</u>		<u>ORGCORP</u>

Flat annotation structures force an ambiguous analysis onto words that are not inherently ambiguous. Forcing flat annotations on the examples above would result in the word ‘Melbourne’ marked as **CITY** , **ORG:EDU** and **SPORTS-TEAM** respectively, when all cases are clearly referring to the **CITY** . Similarly with names, ‘Smith’ would otherwise be marked up both as **PER** and **ORGCORP** .

NAME as an annotation tag can also contain more than just single names, for instance, when used in **ORGCORP** , **NAME** can contain other elements:

W.R. Grace	T. Rowe Price
<u>INI</u> <u>NAME</u>	<u>INI</u> <u>MIDDLE</u> <u>NAME</u>
<u>NAME</u>	<u>NAME</u>
<u>ORGCORP</u>	<u>ORGCORP</u>

2.15.4 What’s in a **name** ?

How ‘namey’ should a word be in order for it to be considered **name ?**

The decision to annotate this entity structure as **NAME** and not **LAST** is reflective of the greater leniency with which we will annotate these structures. To avoid prohibitively lengthy research for each organisation appearing in the corpus, we adhere to the general policy of marking up tokens which conceivably are last names as **NAME** . Taken to an extreme, we annotate ‘name-like’ tokens in the structure of organisations that are not also common words likely to be associated with the business.

For instance, even though ‘**Sony**’ is not, in fact, named after a founder with the same last name, we still mark this up as **NAME** .

Sony
<u>NAME</u>
<u>ORGCORP</u>

Similarly, ‘**Boeing**’ is marked up as **NAME** , without requiring extensive research to identify that it was, in fact, founded by **Mr Boeing**.

In the case of common nouns being used as part of an organisation name, use common sense to mark ‘Walker & Sons’ as **NAME** and not to mark ‘Walker’ up in an organisation such as ‘Baby Walker Co.’

In an organisation such as ‘Walker Designs’, again following the principle of not requiring substantial research for specific annotation decisions, we do annotate ‘Walker’ as **NAME** .

Walker & Sons	Baby Walker Co.	Walker Designs
<u>NAME</u>	<u>ORGCORP</u>	<u>NAME</u>
<u>ORGCORP</u>		<u>ORGCORP</u>

For cases where it is not clear, we opt for **NAME** :

Cray Computers Corp.
<u>NAME</u> <u>JARGON</u>
<u>ORGCORP</u>

Delta Air Lines
<u>NAME</u>
<u>ORGCORP</u>

2.15.5 Edge cases in **name**

Inevitably, some **ORGCORP** examples will not be able to be correctly analysed. In this case, we try to do the best we can. Take the name ‘H.N. & Frances C. Berger Foundation’

H.N. & Frances C. Berger Foundation
<u>INI</u> <u>FIRST</u> <u>INI</u> <u>NAME</u>
<u>NAME</u> <u>NAME</u>
<u>NAME</u>
<u>NAME</u>
<u>ORGCORP</u>

In order to correctly coordinate on the two people, there must be a span of a single given label that is on both sides of the ‘&’. For this, the best answer is to use **NAME** , even if this means that we have a resulting rule of **NAME** plus **NAME** combining to make a **NAME** .

2.16 Further **org** discussion

2.16.1 Orgs in Orgs

References to organisations can be part of the structure of other entities, and as such, should be marked up within them. For instance, **ORG:EDU** entities such as universities often have commercial **ORGCORP** companies, such as a printing press, which refer to the educational institution in the name.

Harvard University Group
<u>NAME</u>
<u>ORG:EDU</u>
<u>ORGCORP</u>

The **Red Cross** is a clearly referenced **ORG** within this larger **ORG**, which is the name of a specific sub-organisation of the **Red Cross**.

Red Cross Blood Bank
<u>ORG:OTHER</u>
<u>ORG:OTHER</u>

General Motors Acceptance Corp.
<u>ORGCORP</u> <u>JARGON</u>
<u>ORGCORP</u>

2.16.2 ‘Freddie Mac’, ‘Fannie Mae’ and ‘Ginnie Mae’

The Federal Home Loan Mortgage Corporation (FHLMC), known as Freddie Mac, is a public government-sponsored enterprise (GSE). Fannie Mae, for instance, has been a publicly traded company since 1968. As such, these entities should be classed as **ORGCORP** , not **GOVERNMENT** .

Freddie Mac	Fannie Mae	Ginnie Mae
<u>NAME</u> <u>NAME</u>	<u>NAME</u> <u>NAME</u>	<u>NAME</u> <u>NAME</u>
<u>NAME</u>	<u>NAME</u>	<u>NAME</u>
<u>ORGCORP</u>	<u>ORGCORP</u>	<u>ORGCORP</u>

Even though ‘Freddie Mac’ is not referring to a person, we nevertheless follow the policy of marking up ‘name-like’ things as **NAME** , and add in **NAME** structure to these entities.

The non-abbreviated structures should be annotated normally:

FEDERAL HOME LOAN MORTGAGE CORP .
JARGON

ORGCORP

2.17 Stock Exchanges

Stock exchanges are often referred to by the city in which they are located. For example, the [New York Stock Exchange](#) is implied by the words “In New York trading”. In order to both maintain a consistent ‘per token’ level analysis, these should be marked as **LOC** nested within the actual **ORGCORP** meaning of the words in this context.

New York Stock Exchange	in New York trading
<u>CITY</u>	<u>CITY</u>
<hr style="width: 50%; margin: auto;"/>	<hr style="width: 50%; margin: auto;"/>
ORGCORP	ORGCORP

Often this distinction is quite subtle, so care should be taken. For example:

Stock prices closed higher in Stockholm, Amsterdam, and Frankfurt, and lower in Zurich. Paris, Brussels, and Milan were closed for a holiday. South African gold stocks closed marginally lower.

Stockholm	Zurich	Milan
<u>CITY</u>	<u>CITY</u>	<u>CITY</u>
<hr style="width: 50%; margin: auto;"/>	<hr style="width: 50%; margin: auto;"/>	<hr style="width: 50%; margin: auto;"/>
ORGCORP	ORGCORP	ORGCORP
Amsterdam	Paris	
<u>CITY</u>	<u>CITY</u>	South African
<hr style="width: 50%; margin: auto;"/>	<hr style="width: 50%; margin: auto;"/>	<hr style="width: 50%; margin: auto;"/>
ORGCORP	ORGCORP	NATIONALITY
Frankfurt	Brussels	
<u>CITY</u>	<u>CITY</u>	
<hr style="width: 50%; margin: auto;"/>	<hr style="width: 50%; margin: auto;"/>	
ORGCORP	ORGCORP	

We are not including the ‘stock exchange’ span in cases such as **Frankfurt stock exchange**, as this would then raise questions of including ‘stock market’ or ‘market’ more generally and other lowercase spans.

Note that **Sydney** can refer to the **Australian Stock Exchange**, formerly known as the **Sydney Stock Exchange**. In this case **Sydney** would be working as a synonym.

2.18 index

The name of a particular stock index. Nikkei Index, Tokyo Stock Price Index Note: Tokyo should also be marked as **CITY** .

Indexes such as the 'Nikkei Index' should be treated differently from **ORGCORP** . These should be marked up as a different top level annotation (**INDEX**), and have the embedded structure of **ORGCORP** (and others as appropriate) added.

Dow Jones	Nikkei index
<u>NAME</u> <u>NAME</u>	<u>NAME</u>
<u>NAME</u>	<u>ORGCORP</u>
<u>MEDIA</u>	<u>INDEX</u>
<u>INDEX</u>	

Note: Index & Fund raise some issues of consistency with respect to capitalisation. E.g. the word 'index' (or in the case of the 'S&P 500', often 'S&P 500-stock index') is usually lowercase. These should be marked up, however, as they are referring to a specific referent in the real world.

Dow industrials
<u>NAME</u>
<u>MEDIA</u>
<u>INDEX</u>

2.19 fund

The name of a particular money fund.

Similar to **INDEX** , mark up **FUND** with inner structure.

Dreyfus World – Wide Dollar	United Nations Population Fund
<u>NAME</u>	<u>ORG:OTHER</u>
<u>FUND</u>	<u>ORG:OTHER</u>

3 facility

Facilities exhibit some organisation qualities, and some location qualities. For instance, a hotel may have both a CEO and an address. It can be bought, sold, opened or closed down. As such, facilities should be annotated with embedded entities following roughly the same pattern as **ORG** and **LOC**.

This includes embedded entities of type: **LOC** **NAME** **NORP** etc. as well as **EVENT**, **YEAR** etc.

the Nagymaros dam	Sydney Harbour Bridge
<u>GPE</u>	<u>CITY</u>
<u>FACILITY</u>	<u>LOCATION:OTHER</u>
	<u>BRIDGE</u>

3.1 airport

Heathrow Airport, Schiphol, Charles de Gaulle, Kingsford Smith

McCarran International Airport	San Francisco International Airport
<u>NAME</u>	<u>CITY</u>
<u>AIRPORT</u>	<u>AIRPORT</u>

3.2 attraction

The name of an attraction, including theme parks, monuments, etc.

Wet 'n Wild, Wonderland, Arch de Triumph

Indianapolis Motor Speedway
<u>CITY</u>
<u>ATTRACTION</u>

3.3 bridge

The name of a bridge. Note, Locations should be marked up as embedded (eg. Sydney Harbour Bridge) Golden Gate Bridge, Sydney Harbour Bridge, Bridge of Sighs

Sydney Harbour Bridge
CITY
LOCATION:OTHER
BRIDGE

3.4 building

The name of a building.

Rockerfeller Center
NAME
BUILDING

Chifley Tower, Eureka Tower, Taj Mahal, Hundertwasserhaus

The name of buildings which are also used as the name of the government body housed within should be marked up as having embedded government entities when its use as a building is synonymous with the (for example) American Government.

the White House said yesterday
BUILDING
GOVERNMENT

The White House, Parliament House, The Pentagon

Pentagon
BUILDING
GOVERNMENT

3.5 stadium

The name of a stadium. Note, references to locations etc should also be marked up. The Melbourne Cricket Ground, the WACA

the Melbourne Cricket Ground
CITY
STADIUM

3.6 station

The name of a station. Town Hall, Central, Lilyfield Station

Grand Central Terminal
STATION

Note, **STATION** is very infrequent in the corpus, so will probably be combined with **FACILITY**.

3.7 street

new

The name of a street, road or highway. **STREET** as a category has more in common with locations than organisations. It clearly fits with the BBN description of Facilities:

Names of man-made structures, including infrastructure, buildings, monuments, etc.

However, streets should be considered with a more ‘location’ centered strategy. As such, we do not mark up embedded **NAME** references in **STREET** entities.

Smith Street Highway 101
STREET CARDINAL
 STREET

/new

We also annotate ‘Wall Street’, referencing the group of finance companies as an embedded street inside GRPORG :

Wall Street
STREET
GRPORG

See Section 9.1 for more information.

3.8 facility:other

Other types of facilities not expressly mentioned here, eg. factories, sewage treatment plants etc. Kimbriki Resource Recovery Centre

Hubble Space Telescope
NAME
 FACILITY

Berlin Wall
CITY
 FACILITY

Kennedy Space Center
NAME
 FACILITY

Pilgrim Nuclear Power Station
NAME
 FACILITY

3.9 Further Facility Category Discussion

3.9.1 facility Vs org

At present, there is no top level distinction between **FACILITY** and **ORG**. It is easier to mark an entity as a **HOTEL** or **MUSEUM** rather than trying to remember whether it should be categorised as an **ORG** or **FACILITY**. These coarse-grained decisions can be put off to a later time to ensure annotation consistency.

3.9.2 facility edge cases

Facilities, having both **ORG** and **LOC** characteristics, often are involved in tricky edge cases. In the following excerpt, it is not the actual Euro Disneyland theme park that is being discussed, but rather the company which owns and runs it.

Traders credited Euro Disney's share performance to ...

Since this article is discussing the finances of the organisation, rather than the theme park for which it is named, it should be marked as **ORGCORP**, with an embedded **ATTRACTION**.

Euro Disney
NORP:OTHER NAME
 ATTRACTION
 ORGCORP

4 loc

Mark up all instances of locations including geo-political entities such as towns and countries, as well as physical locations, both on Earth and off planet.

Geo-political entities are geographical areas associated with some sort of political structure.

Do not mark up locations with embedded structures other than embedded locations:

Southern California
<hr/>
STATE
<hr/>
REGION

Specifically, we do not mark up embedded **NAME** references in **LOC** entities because they are particularly ambiguous. Many locations are named after people, and many people are named after locations. Rather than having, essentially, every city marked up with an embedded **NAME**, we elect to leave **LOC** structures flat, other than embedded with other types of **LOC**.

“Examples of place-related strings that are tagged as **LOC** include named heavenly bodies, continents, countries, provinces, counties, cities, regions, districts, towns, villages, neighborhoods, airports, highways, street names, street addresses, oceans, seas, straits, bays, channels, sounds, rivers, islands, lakes, national parks, mountains, fictional or mythical locations, and monumental structures, such as the Eiffel Tower and Washington Monument, that were built primarily as monuments.”¹

Note that in this annotation task, monumental structures are included as **ATTRACTION** in the **FACILITY** category, rather than **LOC**.

“Markable: Names of locations other than GPE’s, e.g. mountain ranges, coasts, borders, planets, geocoordinates, bodies of water. Also included in this category are named regions such as the Middle East, areas, neighborhoods, continents and regions of continents such as Eastern Europe.”²

¹MUC-7 Named Entity Task Definition, Nancy Chinchor http://www.itl.nist.gov/iaui/894.02/related_projects/muc/proceedings/ne_task.html

²Annotation guidelines for Answer Types, BBN Technologies, Ada Brunstein <http://catalog.ldc.upenn.edu/docs/LDC2005T33/BBN-Types-Subtypes.html>

4.1 city

Tokyo, New York, Chicago, West Groton

Mentions of cities, towns and villages should be marked as **CITY** . See subsection 4.13 for discussion on cities which share the same name as other location types, such as **New York**, and subsection 4.6 for discussion of **CITY-STATE** entities, that act as both city and country, such as Singapore.

When a city is mentioned as a reduced form of the name of an organisation (eg, “In Tokyo, stocks fell...”, referring to the Tokyo Stock Exchange), it should be marked as an organisation with embedded **CITY** .

This is also the case for capital cities, which can be used as a kind of spokesperson for the government of that country. ‘Yesterday, Washington released new findings on...’ In this case, Washington should be marked as a **CITY** embedded in a **GOVERNMENT** .

It is often difficult to distinguish between city and suburb in the names of certain U.S. schools. If unclear, opt for **CITY** .

4.2 suburb

A smaller region within a **CITY** Glebe, Beverly Hills, ...

4.3 state

The largest internal administrative region in a country NSW, New Hampshire, Indiana, N.J., Mass, Massachusetts This includes provinces of China (e.g. Shandong), prefectures of Japan (e.g. Nara Prefecture) and other countries which do not have anything referred to as a ‘state’.

4.4 gpe

Geo-political Entities are larger than cities and have fixed administrative boundaries. **GPE** entities are bounded political areas which are not cities, suburbs states or countries, which each have their own tag.

Even if a country (eg. **the U.K.**) does not have states, mark small administrative regions as **GPE** , not **STATE** . For example, **Brooklyn** (a borough) and **Greenville County** should be marked as **GPE** .

Common **GPE** entities include:

Brooklyn
GPE

Oakland
GPE

Manhattan
GPE

Puerto Rico
GPE

Larger structures can include **GPE** entities, and **GPE** entities can have other structures embedded in them, following **LOC** embedding rules:

San Andreas Fault
GPE
LOCATION:OTHER

U.S. Virgin Islands
NATIONALITY
GPE

4.5 country

Mark up mentions of countries, such as **Australia** and **France**. Note: Do not mark up the definite article 'the' in countries such as 'the **Netherlands**'.

France
COUNTRY

West Germany
COUNTRY

the Phillipines
COUNTRY

Viet Nam
COUNTRY

Note - Mark up countries which no longer exist, and also include countries which have debatable status as country. For example, mark up **Taiwan**, **Tibet**, **Soviet Union** and **Yugoslavia** as countries. Note that 'Soviet Union' should be marked up as a flat **COUNTRY** .

4.6 city-state

Citystates such as **Singapore**, **Hong Kong**, **Luxembourg** and **Monaco** should be marked as **CITY-STATE** . Mentions of these entities represent genuine ambiguity between **STATE** and **COUNTRY** .

For example, in this sentence, the PTB derivation coordinates between “crown prince” and “grand duke”, though one can be crown prince of a country but duke of a city.

```
( (S
  (NP-SBJ (NNP PRINCE) (NNP HENRI) )
  (VP (VBZ is)
    (NP-PRD
      (NP (DT the)
        (NX
          (NX (NN crown) (NN prince) )
          (CC and)
          (NX (JJ hereditary) (JJ grand) (NN duke) )))
      (PP (IN of)
        (NP (NNP Luxembourg) ))))
    (. .) ))
```

4.7 continent

Mark up the name of continents.
Africa, Australia

4.8 ocean

Pacific Ocean, Caribbean Sea, Atlantic Ocean Note: do not mark up the definite article in oceans such as

the Pacific Ocean

OCEAN

Note: Pacific should be marked up as an embedded entity in structures such as this:

Asian

NORP:OTHER

and

Pacific

OCEAN

NORP:OTHER

nations

4.9 region

REGION entities are named areas, usually larger than a city. Regions are contiguous areas for which the precise boundary may be not clearly defined, or may be disputed. Unlike **GPE** entities, which have clear legal distinctions, **REGION** entities often have ‘fuzzier’ boundary distinctions.

Bay Area	Far East
<u>REGION</u>	<u>REGION</u>
East Berlin	
<u>CITY</u>	
<u>REGION</u>	
East Bloc	Latin America
<u>REGION</u>	<u>REGION</u>
Eastern Europe	Midwest
<u>CONTINENT</u>	<u>REGION</u>
<u>REGION</u>	

Further examples include: Central America, Indochina, Scandinavia, Silicon Valley, Urals, Pacific Nations, the West and the Middle East.

Note the difference between **REGION** and **GRPLOC**, which refers to a collection of locations or regions that are not specifically contiguous, but grouped by some other quality, such as financial or linguistic characteristics. See Section 9.2.

4.10 river

Swan River, Murray River, The Mississippi Mark up the name of rivers, without further annotating possible **NAME** entities within them etc.

4.11 space

Any celestial body. Saturn, Milky Way, Andromeda, Titan

4.12 location:other

Locations that don’t fit into any other location category. Mountains, lakes, plateaus, plains, fields within oceans etc. Mt Everest.

4.13 Locations names that refer to different entities

In cases such as **New York** or **Washington**, which can be either a city or another location such as state, country or geopolitical entity, entities should be marked up as accurately as possible based on how they are used in the sentence. For instance, if discussing a state-wide competition, the location should be marked as **STATE**. Many examples are more ambiguous, but general principles apply, for instance, organisations usually discuss their offices being located in cities, not countries.

When these entities are used in an appositional construction, eg: Ernst & Young, New York, today announced . . . , they should be marked as **CITY**.

In coordination structures, such as in a list with other cities, the location should be marked up with the same tag.

In cases where no clear distinction can be made, default to the more well-known entity, which is usually the **CITY** .

4.14 No embedding non-**loc** entities (other than **norp**) in **loc**

We do not annotate potential nested references to **NAME** etc. inside locations, as these references are particularly ambiguous and often very vague. Many cities are named after people, real or fictional, and we cannot hope to identify or verify most of these.

Further, this would substantially complicate the structure of `ORGS`. Take, for instance, the University of Melbourne. We annotate this as:

University of Melbourne
CITY
ORG:EDU

In 1873, the settlement now known as Melbourne was named after the then British Prime Minister, William Lamb, 2nd Viscount Melbourne, whose seat was Melbourne Hall in the market town of Melbourne, Derbyshire.

It is unclear as to how to represent this in our nested structure.

Looking purely at locations that are named after people poses substantial complications. The Cook Islands are named after **Captain James Cook**. The cities of Washington, Seattle, San Francisco, Houston and New York City, to name a few, are named after people.

Researching and correctly representing these relationships would be prohibitively time consuming for annotation. We therefore take the policy of only annotating referenced, embedded locations or **NATIONALITY** information in **LOC** entities.

For example, we do mark up:

San Francisco Bay		Eastern U.S.	
CITY		COUNTRY	
LOCATION:OTHER		REGION	
French	Alps	U S West	Inc.
NATIONALITY	LOCATION:OTHER	COUNTRY	JARGON
LOCATION:OTHER		REGION	
		ORGCORP	
San Francisco Bay Area			
CITY			
LOCATION:OTHER			
REGION			

Note that these embedded **LOC** entities can occur in **LOC** entities which themselves are embedded in other entities, such as **ORGCORP**. Note also that the embedding of cardinal entities, etc., in addresses is allowed.

5 person

PERSON entities can be referred to in a variety of ways. The intention of marking the substructures of **PERSON** entities is to aid in co-reference resolution. In newswire, initial mentions of people frequently include both their first and last names, with subsequent mentions only referring to their last names.

Due to the difficulty in distinguishing between last names and invented names, especially in the names of organisations, we mark all things that look like names as **NAME**. See the discussion in Section 2.15.3.

William	H.	Hudnut	III
<u>FIRST</u>	<u>INI</u>	<u>NAME</u>	<u>CARDINAL</u>
			<u>NAMEMOD</u>
<hr/>			
PER			

5.1 person

We mark up all instances of people, fictional people, characters, first names, last names, nicknames (if referential). NB. For non-human animate objects, such as animals (racehorses) or fictional characters who are not human, use the **ANIMATE** class described in **MISC**.

The following tags may be nested within the **PERSON** tag.

5.2 first

Bob, James, Nicky, Fred, Hugo Note, it is often difficult to distinguish first from middle names (e.g. Mary Beth Smith may use ‘Mary Beth’ as her first name). Unless clear from the context that both should be considered **FIRST**, mark the second name up as a **MIDDLE**.

5.3 initials

R., M.J., T.S.

5.4 name

NAME is used to annotate last names and surnames.

Smith, Jones Note: with naming conventions of other cultures, apply first/last according to use. E.g., if a Chinese name is written with the family name first, then mark them as:

Mao	Zedong
<u>NAME</u>	<u>FIRST</u>
<u>PER</u>	

such that we can give the correct markup given the tokens:

Chairman	Mao	Zedong	Mr	Mao
<u>ROLE</u>	<u>NAME</u>	<u>FIRST</u>	<u>HON</u>	<u>NAME</u>
	<u>PER</u>		<u>PER</u>	
<u>PER</u>				

For further discussion of **NAME** , especially in **ORG** entities, see Section 2.15.

5.5 middle

Robert (Note that names such as these may generally be used as **FIRST** , but mark as **MIDDLE** when used as a middle name...) If it is unclear whether a name is part of a double barrel first name (Mary Lou) or a middle name, mark as a middle name.

5.6 namemod

Jr, Sr, III

5.7 nickname

‘Bobby’, ‘The Baboon’, ‘**Ruddbot**’, ‘Little Tramp’

5.8 hon

In this category we annotate honorific titles including **Sir**, otherMs, **Mr**, **Lady** etc. These honorific titles differ from **ROLE** in that they do not offer any information as to the profession job or other role of the person.

Embed these in the larger **PER** marker.

HON :

Mr

Mrs

Ms

Miss

Messrs.,

Sir

Madam

Saint

Lord

Lady

5.9 role

Mark up titles based on vocation as **ROLE** , such as **Professor**, **Rabbi**, **President**.

Embed these in the larger **PER** marker.

Only tokens that are capitalised should be annotated, for instance, do not mark up **president** in **president Smith of Company Name**. We have taken inspiration from www.formsofaddress.info as a guide.

ROLE examples:

Dr

Professor

Prof.

President

Prime Minister

Secretary of State

Attorney General

Foreign Ministers etc.

Senator
Representative
Judge

Religious titles:
Father
Rabbi

Military titles:
Admiral etc.

Government titles that stay with you:
the Honorable
His/Her Royal Highness
Prince
Princess

Many **ROLE** structures are quite complex, with organisations embedded within them. To match the Treebank annotation and correct attachment, we annotate these structures as one larger entity, rather than two disjoint ones:

New	England	Patriots	Coach	Raymond	“	Rev.	Ray	”	Berry
<u>REGION</u>			<u>ROLE</u>	<u>FIRST</u>		<u>ROLE</u>	<u>FIRST</u>		<u>NAME</u>
<u>SPORTS-TEAM</u>				<u>NICKNAME</u>					
<u>ROLE</u>									
<u>PER</u>									

UAL	Chairman	Stephen	M.	Wolf
<u>ORGCORP</u>	<u>ROLE</u>	<u>FIRST</u>	<u>INI</u>	<u>NAME</u>
ROLE		PER		
PER				

White	House	Budget	Director	Richard	Darman
<u>BUILDING</u>			<u>ROLE</u>	<u>FIRST</u>	<u>NAME</u>
<u>GOVERNMENT</u>		<u>ROLE</u>		<u>PER</u>	
<u>ROLE</u>			<u>PER</u>		
<u>PER</u>					

Democratic	Sen.	Lloyd	Bentsen
<u>NORP:POLITICAL</u>	<u>ROLE</u>	<u>FIRST</u>	<u>NAME</u>
<u>ROLE</u>		<u>PER</u>	
<u>PER</u>			

U.S.	Trade	Representative	Carla	Hills
<u>NATIONALITY</u>	<u>GOVERNMENT</u>	<u>ROLE</u>	<u>FIRST</u>	<u>NAME</u>
<u>GOVERNMENT</u>			<u>PER</u>	
<u>ROLE</u>				
<u>PER</u>				

Courtaulds	Chairman	and	Chief Executive	Sir	Christopher	Hogg					
<u>NAME</u>	<u>ROLE</u>		<u>ROLE</u>	<u>HON</u>	<u>FIRST</u>	<u>NAME</u>					
			<u>ROLE</u>	<u>PER</u>							
<u>ORGCORP</u>	<u>ROLE</u>										
<u>ROLE</u>											
<u>PER</u>											

Assistant Secretary of State	Elliott	Abrams
<u>ROLE</u>	<u>FIRST</u>	<u>NAME</u>
<u>ROLE</u>		<u>PER</u>
<u>ROLE</u>		
<u>PER</u>		

Note that we only mark up **CEO** when used as part of a larger **ROLE** span. Otherwise we assume the capitalisation to be caused only by being part of an acronym.

BCPA	President	and	CEO	David	Emil
<u>GOVERNMENT</u>	<u>ROLE</u>		<u>ROLE</u>	<u>FIRST</u>	<u>NAME</u>
<u>ROLE</u>				<u>PER</u>	
<u>PER</u>					

5.10 Further **per** discussion

5.10.1 Quotation marks around an alias

Quotation marks are often included as part of a nickname inside a larger **PERSON** entity: “ The Godfather ”, “ The Baboon ”. They should not be included in the inner, nested nickname span.

Vito	“ The Godfather ”	Corleone
<u>FIRST</u>	<u>NICKNAME</u>	<u>NAME</u>
<u>PER</u>		

5.10.2 Family Names and Family Entities

Family entities such as ‘the Kennedys’ are unorganised groups of people, and as such should be marked as GRPPER , with an embedded NAME .

the Kennedys <hr style="width: 80%; margin: 0 auto;"/> NAME <hr style="width: 80%; margin: 0 auto;"/> GRPPER	the Kennedy Family <hr style="width: 80%; margin: 0 auto;"/> NAME <hr style="width: 80%; margin: 0 auto;"/> GRPPER
--	--

Note that coordinations of people, making ‘plural’ people, should simply be coordinated, and not annotated as GRPPER . See section 9.3 for more details.

5.10.3 person can be coordinated

Mr	and	Mrs	Bush
<u>HON</u>		<u>HON</u>	<u>NAME</u>
			Φ
<u>HON</u>			
<u>PER</u>			

Bill	and	Melinda	Gates
<u>FIRST</u>		<u>FIRST</u>	<u>NAME</u>
			Φ
<u>FIRST</u>			
<u>PER</u>			

Note the distinction between these coordinated PERSON entities and a group of people who have a specific name to refer to them, such as the Kennedys, which should be marked as GRPPER . See section 9.3 for more details.

5.10.4 International Names

Colombian family names traditionally are double barrel, taking one ‘last name’ from each parent.

Carlos	Salinas	de	Gortari
<u>FIRST</u>	<u>NAME</u>		<u>NAME</u>
		<u>NAME</u>	
<u>PER</u>			

Carlos Salinas de Gortari is referred to a few sentences later as Mr Salinas.

Mr	Salinas
<u>HON</u>	<u>NAME</u>
<u>PER</u>	

5.10.5 An aside on larger spans

We do not join **ROLE** with neighbouring **ORGCORP** entities as we would with **PER** entities.

Leighton	E.	Cluff	M.D.	President	Robert	Wood	Johnson	Foundation	Princeton	,	N.J.
<u>FIRST</u>	<u>INI</u>	<u>NAME</u>	<u>AWARD</u>	<u>ROLE</u>	<u>NAME</u>	<u>NAME</u>	<u>NAME</u>		<u>CITY</u>		<u>STA</u>
<u>PER</u>					<u>NAME</u>						
					<u>ORG:OTHER</u>						

6 norp

NORPS refer to the adjectival forms of entities: Nationality, Other, Religion, Political.

Note: Lower case words can be marked up as **NORPs**.

These entities should not, generally, be marked up with embedded entities, with the possible exception of embedded **LOCs** or **NORPs**. e.g.

Moorish	Science Temple of	America
<u>NORP:OTHER</u>		<u>COUNTRY</u>
<hr/>		
ORG:RELIGIOUS		

“This type is named after its subtypes, nationality, other, religion, political. The distinction between NORP and other types is morphological. American and Americans is a nationality, while America and US are GPEs, regardless of context.”³

This last distinction does not apply in our annotation, as we’re trying to do a better job at this. US is marked up according to how it is used in the sentence (nationality or country).

Markable: Adjectival forms of **GPE** names and Location names (such as American). Adjectival forms of named religions, heritage and political affiliation (such as Democratic, Chinese-American, and Jewish). Head words which refer to people using the name of an entity they are affiliated with, often **GPE**, Location, or Organization. For example, the three Democrats, the Muslims, etc.

Note that organisations, especially **GOVERNMENT** and **ORGCORP**, do not have **NORP** forms. They should be marked as the appropriate organisation. For example, ‘Congressional’, ‘LDP’, ‘JSP’.

6.1 nationality

Adjectival forms of countries.

American, Australian, U.S., French

This distinction is difficult to make in cases where the adjectival and nominal form have the same surface realisation, such as U.S. In these

³Annotation guidelines for Answer Types, BBN Technologies, Ada Brunstein <http://catalog.ldc.upenn.edu/docs/LDC2005T33/BBN-Types-Subtypes.html>

cases, use a substitution test, i.e., substitute the country for another to determine the correct underlying form.

Note that 'Soviet' should be marked as **NATIONALITY** .

6.1.1 Aside on **nationality**

Another complexity that will cause issues with a future CCG conversion is that we're not handling the coercion of country names to nationality where no separate nationality name exists (e.g. 'U.S.' or 'U.K.'). Similarly, **STATE** does not change to **NORP** in places where it is used in an adjectival form. We really should be paying attention to these adjectival forms: a) because we want consistency in how **NATIONALITY** is used; and b) because things like coordination are going to break down in the CCG grammar

6.2 **norp:political**

Adjectival forms of political affiliations. Democratic, Liberal

NORP:POLITICAL should only apply to references to a particular, specific political party. For instance, if someone is described as 'Conservative', this would usually be considered a general political view, and not a specific political party. To complicate matters, however, 'Conservative' is a specific political party in the U.K., compared to a set of any parties that are right of center in the U.S. It is particularly difficult to keep track of the names of political parties worldwide, so err on the side of caution. If it is not clear, default to **NORP:OTHER** .

6.3 **religion**

Adjectival forms of religions.

Muslim, Muslims, Jewish, Christian, Catholic, Jews

6.4 **norp:other**

Other adjectival forms, including GPE names and locations. BBN seems a little chaotic with this.

NATIONALITY , **RELIGION** and **NORP:POLITICAL** refer to adjectival forms for which there is a corresponding noun. All others should be marked as **NORP:OTHER** .

Arab, Hispanic, Palestinian, Machinists, Jovian, Dodger, Victorian, Semitic, Easterners, Darwinian, Alexandrine, machinists, Yippies, Yankee, U.S. Marine, Thatcherite, Southwest, SONGsters, Persian, Indian, New Environmentalism, Inuit, Neanderthal, Western, African-American

6.5 Embedding **norp** entities

In some cases, **NORP** entities, especially **NORP:OTHER** , contain embedded **NORP** entities themselves. In these cases, we mark up both levels of annotation:

Western	European
	<u>NORP:OTHER</u>
<u>NORP:OTHER</u>	

They can also be embedded in other entities, usually a type of organisation:

European	Community
<u>NORP:OTHER</u>	
<u>GOVERNMENT</u>	

African	National Congress
<u>NORP:OTHER</u>	
<u>ORG:POLITICAL</u>	

However, when the **NORP** in question could contain embedded entities, but this would cause the span to no longer matches the name of the country, for instance, do not add in additional entity layers:

South African
<u>NATIONALITY</u>

7 event

The **EVENT** tag covers references to specific events including sports events, wars, natural disasters and named stock market crashes. Just as **FACILITY** as a category combines aspects of **ORG** and **LOC**, **EVENT** combines aspects of **TIMEX** and other named entities.

The types of **TIMEX** entities associated with **EVENT** entities is varied, ranging from a one-off natural disaster to a recurring festival. Some events are so connected with a specific date that they can be used as that date. For instance, 'We will see them on Christmas Day.' or 'I'll be leaving on April Fools' Day.' Since events and dates are so intrinsically linked, we use **EVENT** as another type of 'top level' **TIMEX** entity, which can also be embedded in **TIMEX** expressions, and have them embedded in it.

In addition to **TIMEX** entities, events should be marked with structural embedded entities, including **LOC**, **NAME** , and **ORG**.

Following the general principle, determiners should generally be excluded from the entity span.

7.1 sports-event

Tag the names of sports events, including chess games, motor sports, lawn bowls..

the Pan-American Games, the Ashes

the	2000	Sydney	Olympics
	<u>YEAR</u>	<u>CITY</u>	
<hr/>			
SPORTS-EVENT			

7.2 concert

Named concerts. Live Aid, Wave Aid, Big Day Out, Rock Am Ring

Note: There are two named concerts in the corpus, so this will probably combine with **EVENT**.

7.3 hurricane

The names of hurricanes and cyclones. BBN has a specific subcategory for these. I'm not sure what the best course of action is. They share naming conventions with Cyclones etc, but not Tsunamis, earthquakes etc. Hurricane Hugo, Cyclone Tracy Note: that unlike all other entities with embedded **NAME** entities, as per hurricane naming conventions, **HURRICANE** should be embedded with **FIRST** entities.

Hurricane	Hugo
	<u>FIRST</u>
<hr/>	
HURRICANE	

7.4 natural-disaster

The name of a natural disaster. 2004 Boxing Day Tsunami, 2011 Tōhoku earthquake and tsunami, 1971 San Fernando earthquake, 1976 Tangshan earthquake Note: This category arose based on the category for **HURRICANE**. There are, however, very infrequent mentions to natural disasters that are not hurricanes, or more specifically, 'Hurricane Hugo'. As such, this category will probably be combined with **EVENT**.

7.5 war

The name of a war The Second World War, WWI, Hundred Year War

Cold War	World War II
<hr/>	<hr/>
WAR	CARDINAL
	<hr/>
	WAR

7.6 sports-season

References to a particular sports season:
the 2012 Sydney Swans season

1989	Series
<u>YEAR</u>	
<hr/>	
SPORTS-SEASON	

7.7 event

Types of event not in more specific event categories.

Albuquerque	International Balloon Fiesta	Black Monday
<u>CITY</u>		<u>DAY</u>
	<u>EVENT</u>	<u>EVENT</u>

7.8 Named Events that are also Dates

For entities like Christmas or Anzac Day, which are both dates and events, mark up the ‘innermost’, intrinsic layer first. For example, ‘Christmas’ should be marked up first as an **EVENT**, then as a **DATE**. In other cases, ‘every Christmas’ combines to form a **PERIODIC**.

Christmas	Anzac	Day
<u>EVENT</u>	<u>ARMY</u>	<u>DURATION</u>
<u>DATE</u>	<u>EVENT</u>	
	<u>DATE</u>	

The examples below give an overview of how **EVENT** can combine with **TIMEX** expressions. For more information see Section 13.

Christmas Eve	Christmas	season
<u>EVENT</u>	<u>EVENT</u>	<u>DURATION</u>
		<u>DATE</u>

every Christmas
<u>EVENT</u>
<u>PERIODIC</u>

8 woa

Works of art (WOA) should be marked up with every embedded entity present - with the exception of PER entities, which should use embedded NAME instead. Commonly embedded entities in WOA entities include: YEAR, ORG, LOC, NORP, EVENT etc.

8.1 album

The name of an album.

Back in Black

1	Born in the	U.S.A.
<u>CARDINAL</u>		<u>COUNTRY</u>
<u>ALBUM</u>		<u>ALBUM</u>

The Dark Side of the Moon
<u>SPACE</u>
<u>ALBUM</u>

8.2 book

Book titles.

Pride and Prejudice, War and Peace

1984
<u>YEAR</u>
<u>BOOK</u>

8.3 film

Film titles.

The Matrix, Jurassic Park

8.4 painting

Mona Lisa, Starry Night, Nascita di Venere

8.5 play

Twelfth Night, Much Ado about Nothing

Rosencrantz	and	Guildenstern	Are	Dead
<u>NAME</u>		<u>NAME</u>		
<u>NAME</u>				
<u>PLAY</u>				

8.6 song

Somewhere over the Rainbow

Messa	per	Rossini
		<u>NAME</u>
<u>SONG</u>		

8.7 tv-show

House

Good	Morning	America
		<u>COUNTRY</u>
<u>TV-SHOW</u>		
60	Minutes	
<u>CARDINAL</u>	<u>DURATION</u>	
<u>DURATION</u>		
<u>TV-SHOW</u>		

8.8 woa

Other types of works of art, eg sculptures, ballet, dance performances etc. Swan Lake, The Impossibility of Death in the Mind of Someone Living
Note that this category also includes newspaper articles.

9 group

GROUP is for unorganised groups of entities.

9.1 grporg

GRPORG is for not officially organised groups of organisations. Wall Street

Wall Street
<u>STREET</u>
<u>GRPORG</u>

Here Wall Street is referring to a group of corporations in the finance industry. They are not officially organised, but are known by this term.

9.2 grploc

Groups of locations that are not regions. These do not necessarily need to be contiguous, but instead are groupings base on things in common, for example financial situation or language spoken. PIIGS, First World

9.3 grpper

Unorganised (or unofficially organised) groups of people, including families.

Wall Street Old Guard	the Kennedys
<u>STREET</u>	<u>NAME</u>
<u>GRPORG</u>	<u>GRPPER</u>
<u>GRPPER</u>	

10 misc

MISC entities are the names of other named entities that do not fit into other groupings outlined.

10.1 animate

This is a category for other animate, non-human entities, including racehorses, world trees, pets. Bugs Bunny, Phar Lap

Dumbo	Skippy the Kangaroo
<u>NICKNAME</u>	<u>NICKNAME</u>
<u>ANIMATE</u>	<u>ANIMATE</u>
	<u>TV-SHOW</u>
Mickey Mouse	Dick Tracy
<u>FIRST</u>	<u>FIRST</u> <u>NAME</u>
<u>ANIMATE</u>	<u>ANIMATE</u>

Note the names of racehorses can be particularly unusual constructions:

Karnak on the Nile
<u>NAME</u> <u>RIVER</u>
<u>ANIMATE</u>

10.2 game

The name of a game which is an entity. Monopoly, Team Fortress Two, Portal

Note: This category is not required for this annotation, so will be removed.

10.3 language

The name of a language, official or otherwise. French, English, Yimas

Russian
LANGUAGE

Streetspeak
LANGUAGE

10.4 law

The name of a law or constitutional amendment etc.

Mark up embedded **NAME** in this, not **PER**, even if the person mentioned seems specific. The Kerrigan Decision, Kerrigan v. Commissioner of Public Health

Johnson Act
NAME
LAW

Roe v. Wade
NAME NAME
LAW

Clean Air Act
LAW

RICO
LAW

1974 Budget " Reform " Act
YEAR
DATE
LAW

Section 89
CARDINAL
LAW

10.5 award

The name of an award. The Oscars, Luce Fellowship

the Oscars
AWARD

Luce Fellowship
NAME
AWARD

10.6 electronics

The name of a type, brand or product of (generally consumer) electronics. Macbook Air, Playstation, PS3, PSP, 3DS, GameBoy

80486
CARDINAL
ELECTRONICS

Apple II
ORGCORP CARDINAL
ELECTRONICS

Game Boy
ELECTRONICS

Intel 286
ORGCORP CARDINAL
ELECTRONICS

10.7 product:drug

The name of a drug (product) Viagra

Proleukin
PRODUCT:DRUG

Retin – A
PRODUCT:DRUG

Note: Our general policy of marking up all words starting with a capital letter is complicated by acronyms. We do not annotate acronyms when they stand for common nouns, but do mark up entities in acronym form, including AZT.

AZT
PRODUCT:DRUG

10.8 product:food

The brand/product name of a food Coco Pops, Weetabits, Vegemite

Fuji
PRODUCT:FOOD

Frosted Flakes
PRODUCT:FOOD

10.9 product:other

The name of other products, including both tangible and intangible products. This also includes the names of documents such as standardised tests. Birkenstocks, SATs

Cheer with Color Guard
PRODUCT:OTHER

Personal Retirement Account
PRODUCT:OTHER

Dalkon Shield
NAME
ORGCORP
PRODUCT:OTHER

Tide with Bleach
PRODUCT:OTHER

Also mark up Series A, 1987 Series B, Class B etc. as **PRODUCT:OTHER**.

Series A
PRODUCT:OTHER

Series A , B , C and D
PRODUCT:OTHER PRODUCT:OTHER PRODUCT:OTHER PRODUCT:OTHER
PRODUCT:OTHER
PRODUCT:OTHER

10.10 vehicle

The name of a type of vehicle Hummer, Jeep Cherokee Ford trucks should be marked:

<u>Ford</u> trucks <u>NAME</u> <u>ORGCORP</u>	<u>Jeep</u> <u>Cherokee</u> <u>ORGCORP</u> <u>NORP:OTHER</u> <u>VEHICLE</u>
---	---

10.11 weapon

The name of a weapon AK47

10.12 disease

The name of a disease. Note the span should not include disease related words in lower case such as **disease** or **illness**.

<u>Parkinson's</u> <u>NAME</u> <u>DISEASE</u>	<u>Parkinson's disease</u> <u>NAME</u> <u>DISEASE</u>
---	---

Also annotate mentions of a specific DISEASE in lower case words.

retinoblastoma
DISEASE

Note: AIDS is marked as a disease.

AIDS
DISEASE

10.13 god

The name of a deity, or reference to God. God, Zeus

10.14 **sciname**

The name of a specific scientific name such as genus.
Homo sapiens, Nymphicus hollandicus, Ailurus fulgens

Nymphicus hollandicus

SCINAME

10.15 **Edge Cases**

10.15.1 **org** name in product spans

When annotating a case where an **ORG** name is adjacent to a **MISC** entity, such as the name of a corporation next to a product or vehicle name: Mazda Festiva, mark up the **ORGCORP** additionally, inside the product (e.g. **VEHICLE**) entity:

<div style="display: inline-block; text-align: center;">Ford Falcon</div> <div style="display: inline-block; text-align: center; margin-top: 5px;"><div style="border-bottom: 1px solid black; padding: 2px 10px;">NAME</div><div style="border-bottom: 1px solid black; padding: 2px 10px;">ORGCORP</div><div style="border-bottom: 1px solid black; padding: 2px 10px;">VEHICLE</div></div>	<div style="display: inline-block; text-align: center;">Mazda 3</div> <div style="display: inline-block; text-align: center; margin-top: 5px;"><div style="display: inline-block; border-bottom: 1px solid black; padding: 2px 10px;">ORGCORP</div><div style="display: inline-block; border-bottom: 1px solid black; padding: 2px 10px;">CARDINAL</div><div style="border-bottom: 1px solid black; padding: 2px 10px;">VEHICLE</div></div>
<div style="display: inline-block; text-align: center;">Mazda Festiva</div> <div style="display: inline-block; text-align: center; margin-top: 5px;"><div style="border-bottom: 1px solid black; padding: 2px 10px;">ORGCORP</div><div style="border-bottom: 1px solid black; padding: 2px 10px;">VEHICLE</div></div>	

Generally, do include the **ORGCORP** in the larger span.

10.15.2 **vehicle orgcorp** distinction

Do not mark up instances of the name of a company as a **VEHICLE** etc.

Ford stocks rose

NAME

ORGCORP

10.15.3 **Vehicle Vs Weapon**

Fighter Jets, Tanks, etc should be considered vehicles, as they continue to be vehicles even if they are not currently being used. A Fighter jet is always a method of transportation, and only occasionally used as a weapon. The guns mounted on the jet, however, are always weapons.

10.15.4 Embedding product tags in products: smaller spans in larger spans

In some **MISC** entities, frequently **VEHICLE** where the **ORGCORP** also forms part of the span, an outermost **VEHICLE** span should only be added if that (single word) span stands alone as a **VEHICLE** . For instance, **A380** stands alone as the name of a type of **VEHICLE** even without the **ORGCORP** **Airbus**. As such, it should be marked:

Airbus	A380
<u>ORGCORP</u>	<u>VEHICLE</u>
<u>VEHICLE</u>	

Microsoft	Windows
<u>ORGCORP</u>	<u>PRODUCT:OTHER</u>
<u>PRODUCT:OTHER</u>	

Cherokee, however, when found on its own does not unambiguously refer to the **Jeep Cherokee**, so should be annotated:

Jeep	Cherokee
<u>ORGCORP</u>	<u>NORP:OTHER</u>
<u>VEHICLE</u>	

11 NUMEX

11.1 cardinal

CARDINAL includes all mentions of numbers, both in and outside other entities. We mark up all cardinals, both as stand-alone entities and embedded in other entities.

We use the **CARDINAL** tag to mark up words which signify counts, including ‘several’, ‘few’, ‘single’, ‘dozen’ etc. In the case of definite articles which denote number, we specifically mark up ‘this week’ etc, but not ‘a’ or ‘the’ as denoting number. As with dates, we only mark up cases that are *not* ‘default’ of one.

11.1.1 cardinal in org

All cardinals, including in **ORG** entities, should be marked up, such as 99 Dresses.

99	Dresses
<u>CARDINAL</u>	
<u>ORGCORP</u>	

11.1.2 cardinal in money

To mark up ‘23 million dollars’ correctly, the cardinal should technically include the million, because it changes the meaning of the number. We will do this automatically, to improve consistency.

two	to	three	million	dollars
<u>CARDINAL</u>		<u>CARDINAL</u>	<u>MULT</u>	<u>UNIT</u>
<u>CARDINAL</u>				
<u>MONEY</u>				

We will later automatically add the layer spanning the **CARDINAL** and **MULT** :

two	to	three	million	dollars
<u>CARDINAL</u>		<u>CARDINAL</u>	<u>MULT</u>	<u>UNIT</u>
<u>CARDINAL</u>				
<u>CARDINAL</u>				
<u>MONEY</u>				

11.1.3 An aside about ‘one’

Note that ‘one’ is often used as a pronoun, rather than a **CARDINAL** . We use a simple substitution test, marking only instances where ‘two’ could be substituted, to ensure we only annotate **CARDINAL** instances.

11.2 mult

A ‘multiplier’ marker - e.g. million, billion, trillion. Used to mark up structure of numbers, especial in **MONEY** etc.

10	million		\$	32.82	billion
CARDINAL	MULT		UNIT	CARDINAL	MULT
CARDINAL			CARDINAL		
			MONEY		

This extra layer would be useful in the case of an extended description of an amount, where the amount could be referenced later with just a **CARDINAL** , excluding the **MULT** . For instance:

The total number is expected to be <CD><CD>3</CD> <MULT>million</MULT></CD>, ‘‘but that might go as high as <CD>4</CD>’’, says ...

In this case, the extra **MULT** referring to 4 million has been elided.

This added structure should assist in future coordination tasks, when compared with the alternative of only marking up the larger span of ‘3 million’.

MULT can be ‘raised’ to a **CARDINAL** if left underspecified.

dozens	tens	of	thousands
MULT	MULT		MULT
CARDINAL	MULT		
CARDINAL			

For cases of multiple **MULT** tags, leave structures as flat as possible.

e.g. WSJ1880 s 9

several	hundred	million	dollars
CARDINAL	MULT	MULT	UNIT
CARDINAL			
MONEY			

In the case where a token such as **multimillion** may be split up, annotate the sections as coordinated **MULT** units:

multi	million	dollar
<u>MULT</u>	<u>MULT</u>	<u>UNIT</u>
<u>MULT</u>		
<u>MONEY</u>		

11.3 fold

The **FOLD** tag is similar to the **MULT** in use, covering cases such as fivefold, 10 times as much, twice etc.

500	times	twice
<u>CARDINAL</u>		<u>FOLD</u>
<u>FOLD</u>		

more than	50	times
<u>QUAL</u>	<u>CARDINAL</u>	
<u>CARDINAL</u>		
<u>FOLD</u>		

Note the differences between these analyses. The correct is on the right. Both analyses produce valid dependencies, however the analysis where the **QUAL** is attached as low as possible is closer to the Penn Treebank analysis, and so we preserve it in our annotations.

* more than	three	times	more than	three	times
<u>QUAL</u>	<u>CARDINAL</u>		<u>QUAL</u>	<u>CARDINAL</u>	
<u>FOLD</u>			<u>CARDINAL</u>		
<u>FOLD</u>			<u>FOLD</u>		

11.4 energy

Annotate mentions of energy

about	500	megawatts
<u>QUAL</u>	<u>CARDINAL</u>	<u>UNIT</u>
<u>CARDINAL</u>		
<u>ENERGY</u>		

ENERGY also can occur as a single token:

$$\frac{55 - \text{megawatt}}{\text{ENERGY}}$$

In this case, this single token also conveys cardinality, and as such we perhaps should also be marking up as **CARDINAL** . However, we don't mark up the sub-structure of words like 'yesterday', so adding an extra layer isn't consistent with previous annotation decisions.

Further, if we were to mark up the cardinal, we should also technically be marking up the megawatt **UNIT** .

11.5 ipoints

Short for Index points, mark up mentions of index points, taking care not to mark up percentage points.

$$\frac{\frac{55}{\text{CARDINAL}} \quad \frac{\text{points}}{\text{UNIT}}}{\text{IPOINTS}} \qquad \frac{\frac{\text{about a quarter of a point}}{\frac{\frac{\text{QUAL}}{\text{CARDINAL}} \quad \frac{\text{UNIT}}{\text{UNIT}}}}}{\text{CARDINAL}}}{\text{IPOINTS}}$$

Note that 'point' in **IPOINTS** should be marked as **UNIT** .

Note that while 'points' should be marked up as **IPOINTS** , 'basis points' is a unit equal to one hundredth of a percentage point, and as such should be marked up as **PERCENT** .

$$\frac{\frac{200}{\text{CARDINAL}} \quad \frac{\text{basis points}}{\text{UNIT}}}{\text{PERCENT}}$$

11.6 money

Any mention of an amount of money.

$$\frac{\frac{\text{C\$}}{\text{UNIT}} \quad \frac{9.625}{\text{CARDINAL}}}{\text{MONEY}}$$

$$\frac{\frac{37.5}{\text{CARDINAL}} \quad \frac{\text{Canadian cents}}{\frac{\text{NATIONALITY}}{\text{UNIT}}}}{\text{MONEY}}$$

up to	2.1	million	Singapore	dollars
<u>QUAL</u>	<u>CARDINAL</u>	<u>MULT</u>		
	<u>CARDINAL</u>		<u>NATIONALITY</u>	<u>UNIT</u>
	<u>CARDINAL</u>		<u>UNIT</u>	
	<u>MONEY</u>			

Note than when annotating, the final annotation should include a second span over **CARDINAL** and **MULT** , but this will be added in automatically afterwards.

3	million	dollars	3	million	dollars
<u>CARDINAL</u>	<u>MULT</u>	<u>UNIT</u>	<u>CARDINAL</u>	<u>MULT</u>	<u>UNIT</u>
<u>MONEY</u>			<u>CARDINAL</u>		
			<u>MONEY</u>		

Similarly, the **CARDINAL** layer that **MULT** raises to when not joined with a specified **CARDINAL** will be automatically added in, seen here on the right:

a	million	dollar	contract	a	million	dollar	contract
	<u>MULT</u>	<u>UNIT</u>			<u>MULT</u>	<u>UNIT</u>	
<u>MONEY</u>				<u>CARDINAL</u>			
				<u>MONEY</u>			

Note: Dollars as a stand-alone token should be annotated as **UNIT** , and not **MONEY** .

Los Angeles , traced the <UNIT>dollar's</UNIT> recent \ldots

Further note on this: ‘dollar-denominated securities’ - tokenisation issues force us to ignore instances such as these.

11.7 ordinal

Ordinals are number defining a thing’s position in a series, such as ‘first’, ‘second’, or ‘third’. Ordinal numbers are used as adjectives, nouns, and pronouns.

Annotate all ordinal numbers such as ‘first’, ‘second’, or ‘third’.

the <ORDINAL>first</ORDINAL> company to sell...

Note: do not annotate ordinals used for rhetorical reasons.

first, do ...; second, do ...

ordinal in org entities It is not clear whether or not the use of **ORDINAL** entities in **ORG** entities should retain any semantic concept of ordinality. Whether or not the **First National Bank** was, in fact, the first bank to be a national bank is dubious, and difficult to prove.

We do annotate these **ORDINAL** tokens inside **ORG** entities even when it is not clear that this semantic concept has been retained.

Thus, the following structure should be annotated:

First	Boston	Corp.	First	Interstate	of	California
<u>ORDINAL</u>	<u>CITY</u>	<u>JARGON</u>	<u>ORDINAL</u>			<u>STATE</u>
<u>ORGCORP</u>			<u>ORGCORP</u>			

First	Hospital	Corp.	First	Interstate	of	California
<u>ORDINAL</u>		<u>JARGON</u>	<u>ORDINAL</u>			<u>STATE</u>
<u>HOSPITAL</u>			<u>ORGCORP</u>			

11.7.1 ordinal in time expressions

In time expressions, mark up words that express ordinality (eg. ‘centennial’) as ordinals.

its	centennial	year
	<u>ORDINAL</u>	<u>DURATION</u>
<u>DATE</u>		

11.7.2 ‘Next’ as a **rel** , not an **ordinal**

The words ‘first’ and ‘second’ don’t require more information to process. Even the ordinal ‘last’ (in the sense of ‘final’) is a clearer concept to grasp than the words ‘previous’, ‘next’ and ‘current’. Previous, current and next are related to ordinals, in the sense of they’re the i-1th, ith and i+1th cases. See subsection 13.9.2 for more details.

All of these words should be annotated based only on how they are functioning in the context of the sentence.

Mark words that reference temporal relativity to the current day as **REL** .

Words such as first, second, current, last, second-last, second-to-last, etc. should all be marked as **ORDINAL**

first	nine	months	of the	year
<u>ORDINAL</u>	<u>CARDINAL</u>	<u>DURATION</u>		<u>DURATION</u>
				<u>DATE</u>
<u>DATE</u>				

11.8 percent

Annotate references to percentages and percentage points. Annotated nested structural elements including the token ‘percentage’ as a **UNIT**. Also mark up percentages expressed in words: ‘about a quarter of a percent’

8.45	%				
<u>CARDINAL</u>	<u>UNIT</u>				
<u>PERCENT</u>					
		about a	quarter	of a	percent
		<u>QUAL</u>	<u>CARDINAL</u>		<u>UNIT</u>
		<u>CARDINAL</u>			
		<u>PERCENT</u>			
Thirty – five	percent				
<u>CARDINAL</u>	<u>UNIT</u>				
<u>PERCENT</u>					
		0.25	percentage point		
		<u>CARDINAL</u>	<u>UNIT</u>		
		<u>PERCENT</u>			

See subsection 11.16 for coordinated examples of **PERCENT**. Note that we do not make a distinction between ‘percent gain’ and ‘percent slide’. (Example in: *WSJ0166_7*).

Note that while ‘points’ should be marked up as **IPOINTS**, ‘basis points’ is a unit equal to one hundredth of a percentage point, and as such should be marked up as **PERCENT**.

11.9 quantity

Quantities are usually used with nested **CARDINAL** and **UNIT** of some sort, and are often found within **RATE** structures.

We only look at **QUANTITY** measures that have defined units, for instance, we would mark up 3 teaspoons but not 3 spoons. Similarly, do not mark up 10 men or 20 chickens.

11.9.1 quantity:1d

One dimensional quantities include measures of distance.

$$\frac{\frac{20}{\text{CARDINAL}} \quad \frac{\text{feet}}{\text{UNIT}}}{\text{QUANTITY:1D}}$$

11.9.2 quantity:2d

Two dimensional quantities include measures of size, such as feet, acres, square kilometers etc.

$$\frac{\frac{3,350}{\text{CARDINAL}} \quad \frac{\text{acres}}{\text{UNIT}}}{\text{QUANTITY:2D}}$$

11.9.3 quantity:3d

$$\frac{\frac{\text{about}}{\text{QUAL}} \quad \frac{\frac{1.64}{\text{CARDINAL}} \quad \frac{\text{million}}{\text{MULT}} \quad \frac{\text{barrels}}{\text{UNIT}} \quad \text{a} \quad \frac{\text{day}}{\text{DURATION}}}{\frac{\text{CARDINAL}}{\text{CARDINAL}}}}{\frac{\text{QUANTITY:3D}}{\text{RATE}}}$$

$$\frac{\frac{\frac{1.2}{\text{CARDINAL}} \quad \frac{\text{billion}}{\text{MULT}} \quad \frac{\text{cubic feet}}{\text{UNIT}}}{\text{CARDINAL}}}{\text{QUANTITY:3D}}$$

$$\frac{\frac{\text{few}}{\text{CARDINAL}} \quad \frac{\text{teaspoons}}{\text{UNIT}} \quad \text{per} \quad \text{washload}}{\frac{\text{QUANTITY:3D}}{\text{RATE}}}$$

11.9.4 quantity:other

Some quantities that do not fit into either the `QUANTITY:1D` , `QUANTITY:2D` or `QUANTITY:3D` categories, which we classify as `QUANTITY:OTHER` . These include measures of computational size and degrees, i.e. not spacial measurements.

$$\frac{\frac{360}{\text{CARDINAL}} \quad \text{degrees}}{\text{QUANTITY:OTHER}}$$

$$\frac{40 - \text{megabyte}}{\text{QUANTITY:OTHER}}$$

11.9.5 Divergence from BBN

BBN has also in one instance only marked up the word ‘majority’ as a **QUANTITY:OTHER** , which we consider an annotation error.

11.10 **rate**

RATE covers all rates: measures, quantities or frequencies measured against some other quantity or measure.

RATE includes things like ‘dollars an hour’, ‘dollars an ounce’, ‘beats per minute’

$$\begin{array}{c} \begin{array}{ccccc} 100 & & \text{barrels} & \text{a} & \text{day} \\ \hline \text{CARDINAL} & & \text{UNIT} & & \text{DURATION} \\ \hline \text{QUANTITY:3D} & & & & \\ \hline \text{RATE} \end{array} \\ \\ \begin{array}{ccccc} \text{about} & 11,000 & \text{barrels} & \text{a} & \text{day} \\ \hline \text{QUAL} & \text{CARDINAL} & \text{UNIT} & & \text{DURATION} \\ \hline \text{CARDINAL} & & & & \\ \hline \text{QUANTITY:3D} & & & & \\ \hline \text{RATE} \end{array} \end{array}$$

Note that in the following examples, the **QUAL** joins with the **MONEY** layer. This is due to an idiosyncrasy in the way we express amounts of money in English. Specifically, note that when the examples are read aloud, the ordering is inconsistent with the word order written:

written: \$ 15,000

spoken: fifteen thousand dollars

As such, the phrase spanning the dollar unit and cardinal should have its own **MONEY** span, which the **QUAL** span joins to, even though this goes against the general policy of **QUAL** attaching before **UNIT** .

$$\begin{array}{c} \begin{array}{ccccc} \text{up to} & \$ & 15,000 & \text{a} & \text{month} \\ \hline \text{QUAL} & \text{UNIT} & \text{CARDINAL} & & \text{DURATION} \\ \hline & \text{MONEY} & & & \\ \hline \text{MONEY} & & & & \\ \hline \text{RATE} \end{array} \end{array}$$

about	\$	1.34	a	pound
<u>QUAL</u>	<u>UNIT</u>	<u>CARDINAL</u>		<u>UNIT</u>
	<u>MONEY</u>			<u>WEIGHT</u>
	<u>MONEY</u>			
	<u>RATE</u>			

We do not include a span over what could be considered the larger rate ‘unit’ span, such as ‘beats per minute’, but follow the usual convention of the cardinal attaching as early as possible. This is further discussed in section 11.11.

11.11 speed

We distinguish between **SPEED** and other types of **RATE** due to the frequency of **SPEED** mentions in text. This also has the effect of simplifying how to deal with contracted mentions of units: ‘miles per hour’ to ‘mph’ etc.

Here, deciding whether or not to include a **UNIT** layer of annotation is problematic. ‘Miles per hour’, or ‘mph’, could be considered the **UNIT** of speed measures. Indeed, it would seem sensible to mark up a speed with an embedded **UNIT**, for consistency with other numerical measures:

	80		mph	
	<u>CARDINAL</u>		<u>UNIT</u>	
	<u>SPEED</u>			
	80	miles	per	hour
	<u>CARDINAL</u>	<u>UNIT</u>		<u>DURATION</u>
	<u>QUANTITY:1D</u>			
	<u>SPEED</u>			
*	80	miles	per	hour
	<u>CARDINAL</u>	<u>UNIT</u>		<u>DURATION</u>
		<u>UNIT</u>		
	<u>SPEED</u>			

Trying to allow for a span over ‘miles per hour’ causes problems with how to mark up speed units which are composed of separate words. This, however, does not generate a constituent span of ‘miles an hour’, which should be equivalent to the **UNIT** of this **SPEED**, marked in this derivation as **UNIT**.

*over	188	miles	an	hour
<u>QUAL</u>	<u>CARDINAL</u>	<u>UNIT</u>		<u>DURATION</u>
	CARDINAL		UNIT	
	QUANTITY:1D			
				SPEED

We choose to keep the analysis as flat as possible, following similar structures to other **RATE** structures, and following the convention the Treebank uses of having **QUAL** words such as **over** attach at the lowest point:

over	188	miles	an	hour
<u>QUAL</u>	<u>CARDINAL</u>	<u>UNIT</u>		<u>DURATION</u>
	CARDINAL			
	QUANTITY:1D			
				SPEED

11.12 temperature

Annotate instances of **TEMPERATURE** , marking up cardinality and units. Note that unless otherwise specified, we assume the temperature to be positive.

Note here how the ‘minus’ is attached to the **CARDINAL** as a **QUAL** .

minus	321	degrees	Fahrenheit
<u>QUAL</u>	<u>CARDINAL</u>		<u>UNIT</u>
	CARDINAL		
			TEMPERATURE

20	below	zero
<u>CARDINAL</u>		<u>CARDINAL</u>
		QUAL
		TEMPERATURE

Note that we do not annotate **TEMPERATURE** with embedded **NAME** structures, as we consider that the embedded **NAME** in **Fahrenheit**, **Celsius** and **Kelvin** etc to be sufficiently canonical so as to no longer specifically refer to the person.

11.13 unit

A specific unit of measurement that is not a **RATE** (e.g. beats per minute). These can be used within other **NUMEX** spans, eg **MONEY** or **QUANTITY:1D** etc., but can also stand alone.

MONEY: \$, cents, yen, dollars, US\$, pounds, C\$, Canadian dollars
QUANTITY: hours, acres, miles, ounces, square feet, barrels

Note that **UNIT** can be combined with itself to form specific types of **UNIT** :

Canadian	dollars
<u>NATIONALITY</u>	<u>UNIT</u>
<u>UNIT</u>	

This is then used in a larger **MONEY** span.

more than	one	billion	Canadian	dollars
<u>QUAL</u>	<u>CARDINAL</u>	<u>MULT</u>	<u>NATIONALITY</u>	<u>UNIT</u>
	<u>CARDINAL</u>		<u>UNIT</u>	
<u>CARDINAL</u>				
<u>MONEY</u>				

Note that in **RATE** , the second measure mentioned isn't necessarily a **UNIT** . In the **RATE** 'two dollars per share', 'share' is not a **UNIT** .

11.14 weight

Annotate instances of weights, also marking up embedded **CARDINAL** and **UNIT** .

	15	pounds
	<u>CARDINAL</u>	<u>UNIT</u>
	<u>WEIGHT</u>	
about	300,000	tons
<u>QUAL</u>	<u>CARDINAL</u>	<u>UNIT</u>
	<u>CARDINAL</u>	
<u>WEIGHT</u>		

Note that for cases where the weight is only a span of one token, **UNIT** cannot be marked, and a single layer of **WEIGHT** is used.

90 – pound
<u>WEIGHT</u>

11.15 Edge cases

11.15.1 Numbers that aren't quite numbers

Include numerical references as **NUMEX** even if they are not strictly numbers. For instance:

Three digit price tag
CARDINAL
CARDINAL

11.15.2 **qual** in **numex**

QUAL should always attach as low as possible, to fit the dependency structure found in the Penn Treebank.

QUAL joins with one tag of type x to form a larger span of type x :

almost something
QUAL x
x

No fewer than 24
QUAL CARDINAL
CARDINAL

Note that only qualifying tokens which change the meaning of the entity, more than just adding emotive description, should be marked up as **QUAL** . See Section 12 for more details.

11.15.3 Ratios as **cardinal**

Ratios should be considered cardinals.

the Senate voted 87 – 7
GOVERNMENT CARDINAL

justify a 50 – 50 split
CARDINAL

11.15.4 Roman Numerals

Mark up roman numerals as numbers (**CARDINAL**)

11.15.5 ‘Another’, ‘an additional’ and ‘fewer’ in **numex** spans

Tokens such as ‘another’, ‘an additional’ and ‘fewer’ are often used in such a way as to not change the meaning of the cardinal in **NUMEX** expressions. There are instance when these spans occur within larger **NUMEX** spans. In these cases, these spans should be included within the larger **NUMEX** span, but not explicitly marked up. For instance, they should not be marked as **QUAL** since they do not change the value of the **CARDINAL** .

about	13	million	fewer	bushels
<u>QUAL</u>	<u>CARDINAL</u>	<u>MULT</u>		<u>UNIT</u>
	CARDINAL			
	CARDINAL			
	QUANTITY:3D			

as much as	an additional	\$	12	million
<u>QUAL</u>		<u>UNIT</u>	<u>CARDINAL</u>	<u>MULT</u>
			CARDINAL	
			MONEY	
			MONEY	

11.16 Coordination of **numex** entities

Any coordinations should have an extra layer when it is clear that it is a coordination:

number	to	number	percent
<u>CARDINAL</u>		<u>CARDINAL</u>	<u>UNIT</u>
		CARDINAL	
		PERCENT	

Here it is unclear how to treat ‘between’. It works as a **QUAL** , adjusting the meaning of the **NUMEX** it forms part of, but in this case it must join at the coordination level.

Specifically, this construction requires two words as arguments: a lower and upper bound to span, **from** *X* **to** *Y*. Regardless, we will add in an extra layer of coordination between the *X* and *Y*:

between	number	and	number	percent
<u>QUAL</u>	<u>CARDINAL</u>		<u>CARDINAL</u>	<u>UNIT</u>
	<u>CARDINAL</u>			
	<u>CARDINAL</u>			
	<u>PERCENT</u>			

between	15	cents	and	19	cents	a share
<u>QUAL</u>	<u>CARDINAL</u>	<u>UNIT</u>		<u>CARDINAL</u>	<u>UNIT</u>	
	<u>MONEY</u>			<u>MONEY</u>		
	<u>MONEY</u>			<u>MONEY</u>		
	<u>MONEY</u>			<u>MONEY</u>		
	<u>RATE</u>					

Coordinated spans should cover the whole coordinated span:

five	and	ten	percent
<u>CARDINAL</u>		<u>CARDINAL</u>	<u>UNIT</u>
<u>CARDINAL</u>			
<u>PERCENT</u>			

five	percent	and	ten	percent
<u>CARDINAL</u>	<u>UNIT</u>		<u>CARDINAL</u>	<u>UNIT</u>
<u>PERCENT</u>			<u>PERCENT</u>	
<u>PERCENT</u>				

11.16.1 Ranges

In constructions expressing a range of percentages, often in the form ‘from x to y ’, we mark up both embedded entities (often **MONEY**) and the ‘from’ and ‘to’ construction denoting the range.

ranging from	1.5	%	to	3.7	%
	<u>CARDINAL</u>	<u>UNIT</u>		<u>CARDINAL</u>	<u>UNIT</u>
	<u>PERCENT</u>			<u>PERCENT</u>	
	<u>PERCENT</u>				

It should be noted that constructions such as these can have subtle distinctions in interpretation. Take the following two contrastive examples:

up	\$	1	to	\$	62
	<u>UNIT</u>	<u>CARDINAL</u>		<u>UNIT</u>	<u>CARDINAL</u>
	<u>MONEY</u>			<u>MONEY</u>	

from	\$	1	to	\$	62
	UNIT	CARDINAL		UNIT	CARDINAL
	MONEY			MONEY	
MONEY					

The first expresses a price increase of \$1, to the new price of \$62. The second expresses a range of prices starting at \$1 and extending to \$62. We do not annotate a single span over the first construction since it is not expressing a single cardinal value.

For cases that are unclear between interpretations, that is, where the construction could be used to denote endpoints or a range, we annotate as a range. For instance:

'Prices rose from two to three dollars.'

This could mean that prices rose between two and three dollars, or that prices increased by \$1 from \$2 to a final price of \$3.

from	\$	2	to	\$	3
	UNIT	CARDINAL		UNIT	CARDINAL
	MONEY			MONEY	
MONEY					

from	about	\$	1.24	million	to	\$	4.4	million	and	up
	QUAL	UNIT				UNIT				QUAL
				CARDINAL				CARDINAL		
				MONEY				MONEY		
				MONEY				MONEY		
MONEY										

(decline)	to	\$	367	from	\$	429	per	ounce
		UNIT	CARDINAL		UNIT	CARDINAL		UNIT
		MONEY			MONEY			
		MONEY			MONEY			
RATE								

12 Qualifiers

QUAL changes the meaning of a **NUMEX** or **TIMEX** expression, usually by adjusting one of the limits of a particular (usually numerical) amount.

Common **QUAL** expressions include **almost**, **around**, **nearly**, **more than**, **up to**, **at least**.

We attach **QUAL** entities as low as possible, but to the larger **CARDINAL** span.

In both **NUMEX** and **TIMEX** entities, **QUAL** attaches as low as possible, and produces a larger span of the same type to which it joined.

$$\text{QUAL} + X \rightarrow X$$

Precedence:

Multipliers attach first, then qualifiers, then units, except where coordination forces you to choose a different ordering. (Say, with ‘about \$ 10’). That particular example is only because English has a funny convention where we can put the unit \$ before the cardinal. It should be noted that in speech, this ordering is not preserved, with it becoming ‘about ten dollars’.

QUAL spans change the meaning of an amount, but can also often express editorial content. For example, in the clause ‘could be released as early as next year’, the words **as early as** are marking a point of view, specifically, that next year would be early. Making a distinction between editorial comment and the equivalent meaning of ‘at or before’ is nuanced, and is beyond the scope of this annotation task. We therefore mark up all instances that could be interpreted as changing the meaning of an amount as **QUAL**.

as	early	as	next	year
QUAL			REL	DURATION
				DATE
DATE				

There are many possible points that **QUAL** spans could attach. In order to maintain consistency, and also keep analyses as close to the Penn Treebank original as possible, we will attach **QUAL** spans as low as possible.

about	11,000	barrels	a	day
<u>QUAL</u>	<u>CARDINAL</u>	<u>UNIT</u>		
	<u>CARDINAL</u>			
	<u>QUANTITY:3D</u>	<u>DURATION</u>		
	<u>RATE</u>			

more than	five	inches
<u>QUAL</u>	<u>CARDINAL</u>	<u>UNIT</u>
	<u>CARDINAL</u>	
	<u>QUANTITY:1D</u>	

Matching Treebank analysis:

```

(NP-SBJ-92 (DT the) (NN roof) )
(VP (MD could) (RB n't)
  (VP (VB be)
    (VP (VBN depressed)
      (NP (-NONE- *-92) )
      (NP-EXT
        (QP (RBR more) (IN than) (CD five) )
        (NNS inches) ))))
(. .) ))

```

up to	50	days	15	%	or more
<u>QUAL</u>	<u>CARDINAL</u>	<u>DURATION</u>	<u>CARDINAL</u>	<u>UNIT</u>	<u>QUAL</u>
	<u>CARDINAL</u>		<u>PERCENT</u>		
	<u>DURATION</u>		<u>PERCENT</u>		

12.1 Discussion on where to attach **qual** :

Consider the two analyses:

about	10	Marks	about	\$	10
<u>QUAL</u>	<u>CARDINAL</u>	<u>UNIT</u>	<u>QUAL</u>	<u>UNIT</u>	<u>CARDINAL</u>
	<u>CARDINAL</u>			<u>MONEY</u>	
	<u>MONEY</u>			<u>MONEY</u>	

In the two examples above, it would be ideal to have consistent analyses so that ‘about’ joins with the **CARDINAL** level in both cases, whether directly, or in a span which contains **CARDINAL** . This second analysis

(on the right) would be consistent in terms of spans attaching, but in this case, the **QUAL** does not attach at the lowest level.

In this case, it is more important to maintain consistent attachment as far as possible.

It is worth noting that there will also be examples that break in cases such as coordination:

'about 15 but less than 20 dollars'

'about 20 to 30 dollars'

'between 10 cents and 15 dollars'

'between 10 and 15 dollars'

What the **QUAL** is actually affecting should also be considered. Take the example: 'Well over 1 million Cambodians', with Treebank derivation:

```
(PP (IN of)
  (NP
    (QP (RB well) (IN over) (CD one) (CD million) )
    (NNPS Cambodians) ))))
```

In this case, consider the span of what the words 'well over' affect. If 1.2 qualifies as 'well over' 1 million, then the span must be (1 million). If the span were instead ((well over 1) million) then that must mean 2 or 3 million at the least, to be considered 'well over' one. Since we can tell that this is not the meaning, we see that the span 'one million' must exist before the **QUAL** 'well over' attaches.

Hence, we attach **MULT** before **QUAL**.

12.1.1 quals

well over and just over

well over	50
QUAL	CARDINAL
CARDINAL	
over	35
QUAL	CARDINAL
	AGE
AGE	

30	and over
<u>CARDINAL</u>	<u>QUAL</u>
AGE	
<u>AGE</u>	

There are just seven instances of ‘well over’ in the corpus, and seven instances of ‘just over’. We will consider both as single **QUAL** spans.

Specific qualifiers requiring qualification The phrase ‘as much as’ can be used purely to convey emotion about the quantity it is combined with, but it can also be used to express ‘up to’. Compare the three sentences:

‘*As much as* 10% of new U.S. mortgage securities . . . now flow into Japanese hands.

‘The bond fund will invest in . . . securities, including *as much as* 15 % in foreign securities.’

‘an option to buy *as much as* an additional 1.5 million shares’

Those three sentences convey varying amounts of ‘editorial content’ conveyed in the words ‘as much as’. Since the distinction is quite unclear at times, we default to marking up ‘as much as’ as a **QUAL** in all contexts.

addition to potentially adding emotional or editorial qualifying - less than or equal to. (NP As a further example, take the sentence ‘Stocks rose by *as much as* 200 points.’ Here, ‘as much as’ means the same thing as ‘up to’, that is, ‘less than or equal to.’ Thus, ‘as much as’ can change the meaning as much as ‘almost’ does, so should be marked up as a **QUAL** .

as much as a	dozen
<u>QUAL</u>	<u>CARDINAL</u>
<u>CARDINAL</u>	

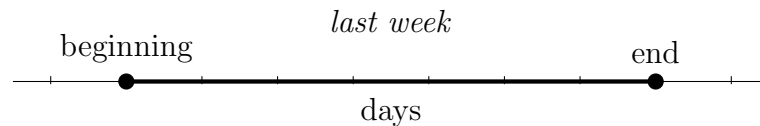
Compare these with ‘only’, which is used only to convey emotion, and does not change the value of any cardinals it is located with. ‘only’ is not annotated as a **QUAL** .

13 TIMEX

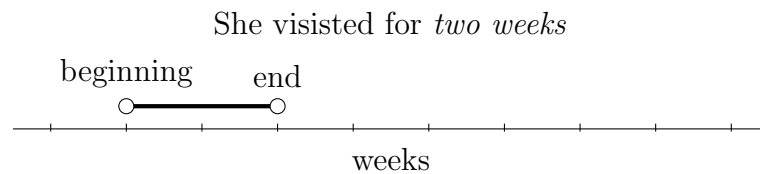
We consider **TIMEX** entities to cover expressions of time, both punctual and longer periods of time.

Most **TIMEX** expressions fall into either the **DATE** , **DURATION** or **PERIODIC** category. These three are the main ‘top level’ types of **TIMEX**, with more detailed sub-types building up inner structure.

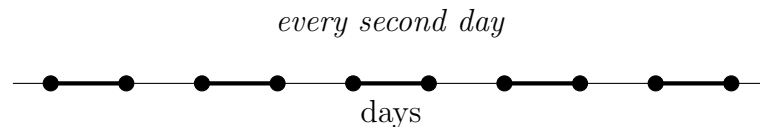
We define **DATE** expressions as any time expressions which can have one or more ends placed on a timeline. This includes specific punctual instances (**15:00**) and longer spans of time, where one or both ends is specific (**January 2012**). Further, we assume that the date of publication, or “today” is known, and therefore treat dates such as **last week** or **yesterday** as dates which can be placed on the timeline.



DURATION covers spans of time for which neither end can be identified and placed on a timeline. For instance, **for two weeks** should be marked up as a **DURATION** , since neither end is specified.



PERIODIC expressions are recurring time events, usually repeating in a regular pattern, such as **annual**, **fortnightly** or **each Monday at 5pm**.



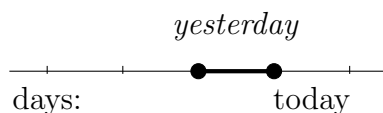
DATE:OTHER covers any times which do not fit into this categorisation.

There are four main rules for timex structures:

$\text{CARDINAL} + \text{DURATION} \rightarrow \text{DURATION}$
 $\text{DURATION} + \text{REL}(+\text{DATE}) \rightarrow \text{DATE}$
 $\text{REL} + \text{DATE} \rightarrow \text{DATE}$
 $\text{DURATION} + \text{DATE} \rightarrow \text{DATE}$

13.1 date

Use **DATE** to annotate any time period for which either one of or both the beginning and end can be specified on a time line. This time line can also be relative to today:



DATE should be further annotated with inner structure, predominantly using the categories following in this **TIMEX** section. For instance, the names of days or months, date and year structures should all be marked up. Additionally, other aspects of the date including **REL** markers, such as 'early' should be marked up.

January 1988 <div style="display: flex; justify-content: space-around; border-top: 1px solid black; margin-top: 5px;"> MONTHYEAR</div> <div style="display: flex; justify-content: space-around; border-top: 1px solid black; margin-top: 5px;"> DATE</div>	the	first <div style="display: flex; justify-content: space-around; border-top: 1px solid black; margin-top: 5px;"> ORDINAL</div>	Tuesday	of	June <div style="display: flex; justify-content: space-around; border-top: 1px solid black; margin-top: 5px;"> MONTH</div> <div style="display: flex; justify-content: space-around; border-top: 1px solid black; margin-top: 5px;"> DATE</div>
			DATE		

Note here that you can consider the 'January 1988' span equivalent to the 'June' span in the two examples, specifically, those **DATE** spans are interchangeable.

Additional examples of **date timex** entities:

- first week, last week

last week <div style="display: flex; justify-content: space-around; border-top: 1px solid black; margin-top: 5px;"> RELDURATION</div> <div style="display: flex; justify-content: space-around; border-top: 1px solid black; margin-top: 5px;"> DATE</div>	first	week	of	July <div style="display: flex; justify-content: space-around; border-top: 1px solid black; margin-top: 5px;"> MONTH</div> <div style="display: flex; justify-content: space-around; border-top: 1px solid black; margin-top: 5px;"> DATE</div>
				DATE

this section is new

When combining a **DURATION** with other nested structures which

carry inherent **DATE** information, that is: **NUMDAY** , **DAY** , **MONTH** or **YEAR** , the largest span the **DURATION** combines with should be annotated as **DATE** .

week	ended	Sept.	30
<u>DURATION</u>	<u>REL</u>	<u>MONTH</u>	<u>NUMDAY</u>
<u>DATE</u>			
<u>DATE</u>			

This is particularly common in structures such as: ‘the week ended June 20’, or ‘week ended Tuesday’.

In cases such as these, the **DURATION** can combine either with a **DATE** or a **PERIODIC** , which is less likely in newswire text, to form a larger **DATE** or **PERIODIC** span.

It is this specificity on the **DATE** (e.g. ‘Tuesday’) that allows the wider **TIMEX** to be pinned on a timeline.

Comparing the two annotations (correct and incorrect):

week	ended	Sept.	30
<u>DURATION</u>	<u>REL</u>	<u>MONTH</u>	<u>NUMDAY</u>
<u>DATE</u>			
<u>DATE</u>			

*

week	ended	Sept.	30
<u>DURATION</u>	<u>REL</u>	<u>MONTH</u>	<u>NUMDAY</u>
<u>DATE</u>			
<u>DATE</u>			

- next year, over the next year, next Tuesday, tomorrow

next	year	end of next	week
<u>REL</u>	<u>DURATION</u>	<u>REL</u>	<u>DURATION</u>
<u>DATE</u>		<u>DATE</u>	
<u>DATE</u>			

- fiscal year (keep ‘fiscal’ inside the date span)

fiscal	1989
	<u>YEAR</u>
<u>DATE</u>	

- “first-quarter” (as one token)

fiscal	1989	first – quarter
	<u>YEAR</u>	<u>DATE</u>
<u>DATE</u>		

- a “year ago”

a year ago
 $\frac{\text{DURATION}}{\text{REL}}$
 DATE

- week through last Thursday
 ‘Stock funds ...dropped more than 2 % in the week through last Thursday ...’

week through last Thursday
 $\frac{\text{DURATION}}{\text{REL}}$ $\frac{\text{DAY}}{\text{DATE}}$
 DATE

- yesterday

yesterday
 DATE

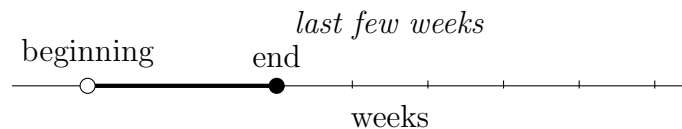
Note - ‘yesterday’ when used as a non-literal ‘yesterday’, (eg, ‘the troubles of yesterday’) should be marked as DATE:OTHER , just as ‘nowadays’ etc.

- **Decades** should be marked up as DATE entities directly.

1900 through the early 1950s
 $\frac{\text{YEAR}}{\text{REL}}$ $\frac{\text{DATE}}{\text{DATE}}$
 DATE

See Section 13.12 for more details.

Dates with only one end pinned down



Date entities can also have only one date which is pinned down, often only when also combined with the context of the date the article was printed. Common examples of these include **in recent years** and **for the last few weeks**.

recent years
 $\frac{\text{REL}}{\text{DURATION}}$
 DATE

recent weeks
 $\frac{\text{REL}}{\text{DURATION}}$
 DATE

Raising to date As soon as a DURATION span becomes unambiguous, usually by collecting a REL or DATE, it becomes a DATE span. That is, as soon as it can have at least one end pinned down on a timeline, it becomes a DATE.

Dates in Dates

Here, first quarter is modifying ‘last year’, so ‘last year’ should be considered as its own DATE entity. This also fits with a substitution test, giving an allowable substitution of first quarter 1986, for instance.

*	<u>first</u>	<u>quarter</u>	<u>last</u>	<u>year</u>
	ORDINAL	CARDINAL	REL	DURATION
		DURATION		
	<hr/>			
	DATE			
	<hr/>			
	<u>first</u>	<u>quarter</u>	<u>last</u>	<u>year</u>
	ORDINAL	CARDINAL	REL	DURATION
		DURATION		
			DATE	
	<hr/>			
	DATE			

However, for the annotation step, we have decided on a policy of leaving structures as flat as possible, and adding in extra DATE layers, as appropriate, programmatically afterwards. Thus, though the second analysis, with extra DATE layer spanning ‘last year’, is more accurate, we do not require this extra layer of annotation, as adding it programmatically will allow for a more consistent analysis.

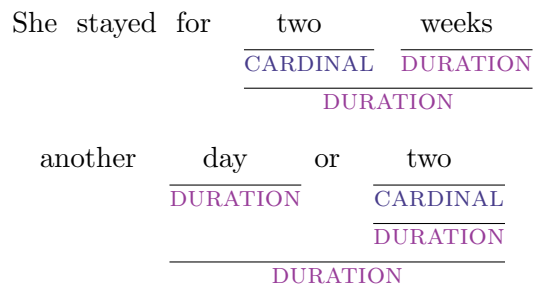
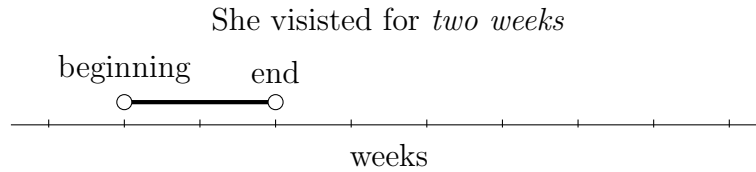
*	<u>next</u>	<u>year</u>	<u>'s</u>	<u>first</u>	<u>quarter</u>
	REL	DURATION		ORDINAL	CARDINAL
					DURATION
	<hr/>				
	DATE				
	<hr/>				
	<u>next</u>	<u>year</u>	<u>'s</u>	<u>first</u>	<u>quarter</u>
	REL	DURATION		ORDINAL	CARDINAL
		DATE			DURATION
	<hr/>				
	DATE				

Dates which carry duration information

Note that although TIMEX expressions such as January and yesterday imply specific durations, these should nevertheless be marked up as a DATE span. References to time durations should only be marked as DURATION if neither the start nor end of the duration can be specified with relation to a time line.

13.2 duration

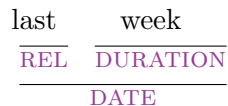
A **DURATION** is a time period that has neither end anchored to a time line:



Note that ‘another’ should not be annotated, as the meaning of the token does not affect the semantics in the same way that **QUAL** does.

13.2.1 duration within date

A common pattern inside **TIMEX** entities is the combination of a **DURATION**, a time span which, by itself, cannot be pinned down to a specific start or finish time, and a **DATE**, which can.



This template should be considered a rule: **REL** + **DURATION** → **DATE**

13.2.2 duration without date on ambiguous times

In expressions such as a good day, where it is not clear from immediate context when exactly the day in question occurred, we mark up the span as a **DURATION** without further **DATE** span.



13.2.3 Quarters

Financial quarters should be marked as ‘quarter’ years, with embedded **CARDINAL** :

$$\frac{\text{quarter}}{\frac{\text{CARDINAL}}{\text{DURATION}}}$$

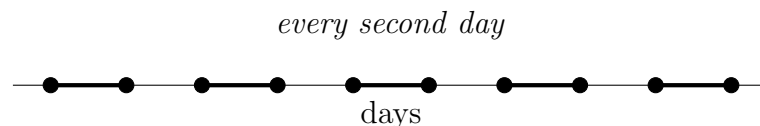
A ‘quarter’ as a token implies a duration, specifically a quarter of a year. When combined with an ordinal or other date structure, e.g. ‘first quarter 1980’, it resolves to a **DATE**. From context, we can identify the bounds of the ‘fiscal first quarter’, or ‘the last quarter of the year’.

Quarter by itself implies ‘of the year’ and should be marked up with its cardinal meaning.

Note: similarly, ‘quarter’ used as a ‘quarter dollar’ should also be marked up as a cardinal.

13.3 periodic

The **PERIODIC** tag is for recurring **DATE** entities, usually a set of **DATE** entities. This includes mentions such as ‘annual’, ‘weekly’, ‘fortnightly’, ‘every Tuesday’ etc.



Only mark up these as **PERIODIC** if they are specifically acting as recurring, periodic markers. For instance, the example ‘Tuesday’ does not always convey **PERIODIC** and so should not be marked as such except for instances such as: ‘On a Tuesday, like clockwork, Thomas goes swimming.’

PERIODIC mentions are different from **DATE** mentions, in that they have set boundaries

Similarly, ‘On the weekend’ should be marked as periodic if it refers to a recurring time, but not if it refers to a one-time event:

On the weekend, Sam goes swimming.

weekend
PERIODIC

On the weekend, Sam will go swimming.

weekend
DATE

Welcome to the annual charity ball:

annual
PERIODIC
monthly
PERIODIC
every month
 DURATION
PERIODIC

Meetings are every Wednesday.

every Wednesday
 DAY
PERIODIC

The study group meets Mondays at 2pm.

supplies programs on Saturdays , Sundays and Mondays .
PERIODIC
PERIODIC
PERIODIC

‘Each of the’ is a common construction which turns a **DATE** span into a larger **PERIODIC** span:

each of the past three years
REL
CARDINAL
DURATION
 DURATION
 DATE
PERIODIC

Correct analysis:

each of the five previous months
CARDINAL
REL
DURATION
 DATE
PERIODIC

Incorrect analysis - note the **DURATION** span on ‘previous months’.

each	of the	five	previous	months
		<u>CARDINAL</u>	<u>REL</u>	<u>DURATION</u>
			<u>DURATION</u>	
<u>PERIODIC</u>				

Edge cases for **PERIODIC** :

Mark up ‘daily’ and ‘non-daily’ as periodic, for instance, when used to refer to types of newspapers. However, do not mark up ‘weeklies’.

13.4 **date:other**

References to times that don’t fit into the scheme

`<DATE:OTHER>in recent times</DATE:OTHER>`

now
metaphorical today, and yesterday...
nowadays
at the moment
these days

What kind of ‘today’? We assume when annotating that we know when the canonical ‘today’ is, that is, we know when the article was printed, such that references to other dates relative to ‘today’ are still treated as **DATE** . In this manner, we can usually annotate ‘today’ as a **DATE** . There are examples, however, where the meaning of ‘today’ changes, and in certain cases, it should be annotated as a **DATE:OTHER** or even a **PERIODIC** :

Today she will be signing autographs at the pool .
DATE

Today , she won’t be seen anywhere near a pool .
DATE:OTHER

Without context, these can be difficult to distinguish. We default away from **DATE:OTHER** when possible.

13.5 age

The **AGE** tag marks up ages.

12	years	old
<u>CARDINAL</u>	<u>DURATION</u>	
<u>AGE</u>		

13.6 day

Mark up the names of the days of the week: ‘Monday’, ‘Tuesday’, ‘Wednesday’ etc.

DAY is an *inner* tag, existing within a larger **TIMEX** (usually **DATE**) tag span.

When found without other **TIMEX** constructions, **DAY** is embedded in a **DATE** tag, taking extra specification from context. That is, we assume that the larger context is clear from the sentence or article.

on Tuesday , she was elected ...
<u>DAY</u>
<u>DATE</u>

DAY can also occur within larger **DATE** constructions, where it combines with them immediately with other elements, usually **MONTH**, **NUMDAY** or **YEAR**, to add specificity to the larger **DATE** structure:

Tuesday	,	October	10	,	1989
<u>DAY</u>		<u>MONTH</u>	<u>NUMDAY</u>		<u>YEAR</u>
<u>DATE</u>					

If a **DAY** does not join other ‘date’-like tokens directly, only then does it immediately take **DATE** as the larger (often outermost) annotation span.

week	ended	Tuesday
<u>DURATION</u>	<u>REL</u>	<u>DAY</u>
		<u>DATE</u>
<u>DATE</u>		

It should be noted that **DAY** , **MONTH** and **YEAR** carry **DATE** like information, which is usually clear from the wider context of the sentence. That is, a reference to a **DAY** etc. in newstext is usually sufficient to be able to pin it down on a timeline, and it is rarely left ambiguous, as a **DURATION** is. When combining with **DURATION** , we should ensure that the **DURATION** span combines with a **DATE** span which contains as specific a **DATE** as possible, that is, it should not combine directly with the **DAY** , **MONTH** and/or **YEAR** spans, but to a **DATE** layer which combines as many of them as are present.

*	week	ended	Tuesday
	<u>DURATION</u>	<u>REL</u>	<u>DAY</u>
	<u>DATE</u>		

13.7 month

Annotate the names of months of the year: January, February, March etc.

August	1985
<u>MONTH</u>	<u>YEAR</u>
<u>DATE</u>	

13.8 numday

This is for references to days using numbers, ie, the 12th. It is always embedded in a **DATE** and usually with a **MONTH**.
15th, 1st, ...

Nov.	21
<u>MONTH</u>	<u>NUMDAY</u>
<u>DATE</u>	

13.9 rel

REL expressions show the relationship between another **TIMEX** expression and the ‘current day’. **REL** expressions often tie a duration to a fixed date.

Common **REL** expressions are ‘next’, ‘ago’, ‘last’, ‘this’, ‘past’, ‘end’, ‘ended’, ‘ending’, ‘previous’, ‘early’, ‘after’, ‘following’, ‘later’, ‘before’ and ‘most recent’.

General principle: **REL** + **DURATION** → **DATE**

a	year	earlier
	<u>DURATION</u>	<u>REL</u>
<hr/>		
DATE		

rest of the century

the	rest	of the	century
	<u>REL</u>		<u>DURATION</u>
			<hr/>
			DATE
<hr/>			
DATE			

two recent months

two	recent	months
<u>CARDINAL</u>	<u>REL</u>	<u>DURATION</u>
<hr/>		
DATE		

end of the month

the	end	of the	month
	<u>REL</u>		<u>DURATION</u>
			<hr/>
			DATE
<hr/>			
DATE			

the year to date

the	year	to date
	<u>DURATION</u>	<u>REL</u>
<hr/>		
DATE		

earlier	this	year
<u>REL</u>	<u>REL</u>	<u>DURATION</u>
		<hr/>
		DATE
<hr/>		
DATE		

In this example, we leave the **DATE** as flat as possible, as it is ambiguous as to which should attach first. **next** (couple of years) or (next couple) of years

next	couple	of	years
<u>REL</u>	<u>CARDINAL</u>		<u>DURATION</u>
DATE			

Incorrect analyses:

*	next	couple	of	years
	<u>REL</u>	<u>CARDINAL</u>		<u>DURATION</u>
		DURATION		
	DATE			

*	next	couple	of	years
	<u>REL</u>	<u>CARDINAL</u>		<u>DURATION</u>
	CARDINAL			
	DATE			

Just as ‘**earlier**’ frames a time expression with respect to another, ‘**same**’ links two time expressions:

the	same	day
	<u>REL</u>	<u>DURATION</u>
DATE		

Do not mark as **REL** words which do not fix an underspecified **DURATION** to the timeline.

until	Dec.	31	of	this	year
	<u>MONTH</u>	<u>NUMDAY</u>		<u>REL</u>	<u>DURATION</u>
				DATE	
DATE					

13.9.1 Consecutive

‘Consecutive’ links time expressions to one another, but does not link an expression to the current timeline. It should be included in the **DATE** entity, but not explicitly marked up as something.

Tokens such as ‘consecutive’, ‘in a row’, and ‘straight’ add meaning that is more concrete than ‘only’, however it still does not change the numerical meaning, and so should not be marked up as a **QUAL**.

Take the example ‘fifth consecutive week’:

fifth	consecutive	week
<u>ORDINAL</u>		<u>DURATION</u>
<u>DATE</u>		

Note that in some cases where we cannot assume that elements of the **TIMEX** are consecutive, we must keep the tokens separately annotated under two different tags. This is a rare but interesting artefact of the ambiguity of which six months of the year are being referenced.

Stocks rose in six months of the year.

Whereas the sentence ‘Stocks rose in six consecutive months of the year.’ would have a different analysis and one entity covering ‘six consecutive months of the year’.

fifth straight week
fifth week straight
fifth week in a row

This is something we have explicitly decided not to cover in this annotation.

13.9.2 ordinal Vs. rel

If it’s absolute and not relative to the current time, then it’s an **ORDINAL**.

the last week in March → straight ORD, because that doesn’t change with respect to today.

first, second, third → **ORDINAL**

next, previous, current → **REL**

last, second-last → **ORDINAL** or **REL** depending on context.

In this example, the token **last** is only acting as a word which locates the event in time relative to the current day. ‘**Last**’ means here ‘previous from now’, and should be marked as a **REL**.

last	Tuesday	last	year
<u>REL</u>	<u>DAY</u>	<u>REL</u>	<u>DURATION</u>
<u>DATE</u>		<u>DATE</u>	

In the following example, the meaning of **last** is more closely referencing the positional aspect in the list. Thus, it should be marked directly as an **ORDINAL**.

second	to	last
<u>ORDINAL</u>		<u>ORDINAL</u>
<u>ORDINAL</u>		
last		year
<u>REL</u>		<u>DURATION</u>
<u>DATE</u>		

13.10 season

Use **SEASON** to mark up temporal seasons: summer, autumn, winter, spring

spring
<u>SEASON</u>
<u>DATE</u>

Note - Mark **SEASON** as a type of **DATE** , skipping the **DURATION** layer. The **SEASON** annotation contains this implicit **DURATION** information, as with **YEAR** etc.

13.11 time

The distinction between **DATE** and **TIME** is difficult to identify with our definition of **DATE** as any time expression which can be placed on a timeline, as **TIME** expressions such as **2pm Tuesday** also satisfy this constraint.

We treat **TIME** expressions as a specific subset of **DATE** expressions, and only mark up as **TIME** entities precise ways of specifying an hour or minute, and include this as part of a larger **DATE** span.

Represent things like '9:00am' as times. Limit time to things that are specifically things like '9:32' or 'ten o'clock'. Leave references to 'morning', 'afternoon' etc as **DURATION** .

See section 13.14.1 for more details.

13.12 year

Years should be marked **YEAR** .

While decades, e.g. '1920s', also convey information of **YEAR** , they should instead be marked up as **DATE** .

starting in <DATE><YEAR>1980</YEAR></DATE> and lasting through the <DATE>1980s

between 1998 and 2000
 $\frac{\text{YEAR}}{\text{DATE}} \quad \frac{\text{YEAR}}{\text{DATE}}$
 $\frac{\text{QUAL}}{\text{DATE}}$

Just as we would mark up plurals of other entities as the entity in question, we also mark up **YEAR** spans, such as ‘1983-1988’ as **YEAR** .

due 1991 – 1999
 $\frac{\text{YEAR}}{\text{DATE}}$

We do not have a specific ‘Decade’ category, but instead mark up mentions of decades, such as ‘the 1950s’, directly as a **DATE** .

in the early 1950s
 $\frac{\text{REL} \quad \text{DATE}}{\text{DATE}}$

13.13 More examples

Since **TIMEX** expressions can be complex and intricate, we have included a number of extra examples here.

fiscal first quarter

fiscal first quarter
 $\frac{\text{ORDINAL} \quad \text{DURATION}}{\text{DATE}}$

the next 3 quarters

the next three quarters
 $\frac{\text{ORDINAL} \quad \text{CARDINAL} \quad \text{CARDINAL}}{\text{DATE}}$

‘... payment at the end of each year’

end	of	each	year
<u>REL</u>			<u>DURATION</u>
			<u>PERIODIC</u>
			<u>PERIODIC</u>

first two weeks of each month

first	two	weeks	of	each	month
<u>ORDINAL</u>	<u>CARDINAL</u>	<u>DURATION</u>			<u>DURATION</u>
					<u>PERIODIC</u>
					<u>PERIODIC</u>

first two weeks of June

first	two	weeks	of	June
<u>ORDINAL</u>	<u>CARDINAL</u>	<u>DURATION</u>		<u>MONTH</u>
				<u>DATE</u>

as early as next week

as	early	as	next	week
	<u>QUAL</u>		<u>REL</u>	<u>DURATION</u>
				<u>DATE</u>
				<u>DATE</u>

as	early	as	next	year	's	first	quarter
	<u>QUAL</u>		<u>REL</u>	<u>DURATION</u>		<u>ORDINAL</u>	<u>CARDINAL</u>
				<u>DATE</u>			<u>DURATION</u>
							<u>DATE</u>
							<u>DATE</u>

the current crop year

the	current	crop	year
	<u>REL</u>		<u>DURATION</u>
			<u>DATE</u>

the first 9 months

the	first	nine	months
	<u>ORDINAL</u>	<u>CARDINAL</u>	<u>DURATION</u>
			<u>DURATION</u>

two more years

two	more	years
CARDINAL		DURATION
DURATION		

Start of this year

start	of	this	year
REL		REL	DURATION
		DATE	
DATE			

13.14 Edge Cases

13.14.1 Mornings, afternoons and nights

Yesterday is a **DATE** , and should be treated as such in the phrase *yesterday afternoon*

yesterday	afternoon
DATE	DURATION
DATE	

Yesterday afternoon is like last week, with ‘yesterday’ carrying an implied **REL** meaning ‘previous’.

‘Morning’, ‘afternoon’ and ‘evening’ decisions: ‘Morning’, ‘afternoon’, ‘evening’, etc. should be marked as **DURATION**

‘Mornings’, ‘afternoons’ etc. should be marked as **PERIODIC**

final	hour
ORDINAL	DURATION
DURATION	

five	minutes
CARDINAL	DURATION
DURATION	

Late	Friday	night
REL	DAY	DURATION
		DATE
DATE		

13.14.2 References to named, common hours

Some time references are referred to by name, for example **meal hours**, **early morning hours**, etc. These should be marked up inside the **DURATION** tag, or **PERIODIC**, as the context dictates.

$\frac{\text{early}}{\text{REL}} \quad \frac{\text{morning}}{\text{DURATION}} \quad \frac{\text{hours}}{\text{DURATION}}$ $\frac{\hspace{10em}}{\text{DURATION}}$	$\frac{\text{meal} \quad \frac{\text{hours}}{\text{DURATION}}}{\text{PERIODIC}}$
---	--

In the phrase **global news hour**, however, only mark up ‘hour’ as a **DURATION**, since there is no agreed-upon definition of ‘global news hour’.

13.14.3 Sub sections of time expressions

Some dates are referenced more specifically as being in larger **TIMEX** elements. For example, **three of every four days**, **eight of 12 months**.

$\frac{\text{eight}}{\text{CARDINAL}} \quad \text{of} \quad \frac{\text{12}}{\text{CARDINAL}} \quad \frac{\text{months}}{\text{DURATION}}$ $\frac{\hspace{10em}}{\text{CARDINAL}}$ $\frac{\hspace{10em}}{\text{DURATION}}$
--

Mark these up inside a larger **TIMEX** span, grouping **CARDINAL** spans as closely as possible.

13.14.4 **date** and **event** often overlap

‘Black Monday’ in this corpus refers to a stock market crash in 1987. It is used to refer to the event itself, but also frequently used in references to the date of the event.

$\frac{\text{Black} \quad \frac{\text{Monday}}{\text{DAY}}}{\text{EVENT}}$	$\frac{\frac{\text{months}}{\text{DURATION}} \quad \frac{\text{following}}{\text{REL}} \quad \frac{\text{Black} \quad \frac{\text{Monday}}{\text{DAY}}}{\text{EVENT}} \quad \frac{\text{1987}}{\text{YEAR}}}{\text{DATE}}$
--	--

Similarly, ‘Christmas’ is an event which is strongly associated with a recurring time period. We mark it up as an **EVENT**, which can then be used in **DATE** structures, paying attention to the **DATE** structures in question. Specifically, the **EVENT** span covers both tokens in ‘Christmas Day’, so this is not marked up as **DATE**.

Christmas	Day	week	before	Christmas
EVENT		DURATION	REL	EVENT
DATE		DATE		

In this example, ‘Christmas’ joins **DURATION** token ‘season’. Note that if ‘Season’ had been capitalised, we would have included it as part of the **EVENT** entity.

Christmas	season
EVENT	DURATION
DATE	

See Section 7.8 for more examples.

13.14.5 **date** with **date** elements embedded

days	following	the	June	4	massacre	in	Beijing
<u>DURATION</u>	<u>REL</u>		<u>MONTH</u>	<u>NUMDAY</u>			<u>CITY</u>
			<u>DATE</u>				
					EVENT		
<u>DATE</u>							

13.14.6 Within a short period of time

This doesn’t really qualify as a strict **DURATION**. BBN annotated it once out of three times. We do not mark it up as a **TIMEX** entity.

13.14.7 This time and next time

‘Time’ can be used as an unspecified **TIME** duration: ‘I liked the Melbourne Cup this time. We will leave all examples such as these unannotated.

TIMEX expressions such as ‘this time’, ‘at the time’, ‘now’ and ‘in this instance’ are problematic and complicated. The interpretation for these

expressions is very nuanced. The BBN analysis for examples such as these is inconsistent. We decide to leave ‘this time’ and ‘at the time’ unmarked.

this	time	*	this	time
			<u>REL</u>	<u>DURATION</u>
			<u>DATE</u>	

13.14.8 Halves and Quarters - cardinal and duration

If there is a time **DURATION** specified then we should treat half as a **CARDINAL** that will span to that **DURATION**.

first	half	of	the	year
<u>ORDINAL</u>	<u>CARDINAL</u>			<u>DURATION</u>
				<u>DATE</u>
<u>DATE</u>				

14 timex discussion

14.1 Underspecified overlapping timex spans

In many **TIMEX** spans, multiple possible spans are potentially valid interpretations. Consider: ‘the first half of the year’

We annotate this as a flat structure, leaving both of the following phrasings possible:

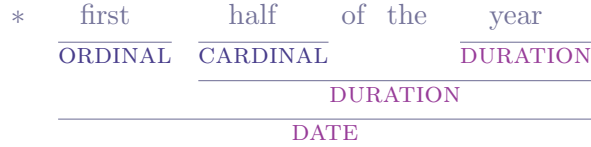
‘[first half] of the year’
‘first [half of the year]’

If there is no **DURATION** specified, then half *raises* to a **DURATION**

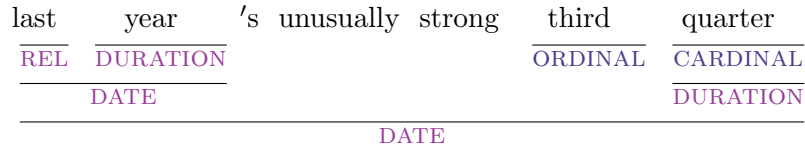
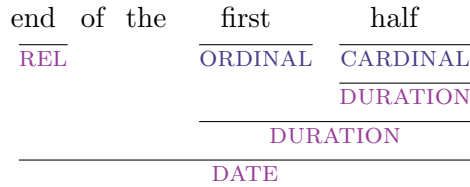
during	the	first	half
		<u>ORDINAL</u>	<u>CARDINAL</u>
			<u>DURATION</u>
		<u>DURATION</u>	

Note that the following analysis is problematic for the same reason as **TIMEX** expressions such as ‘two weeks of June’ or ‘three barrels of oil’

in that it is unclear where attachment should happen. Both ‘first half’ and ‘half of the year’ are valid possibilities, and as such, we elect to keep the structures as flat as possible, and defer to the analysis of the Treebank.



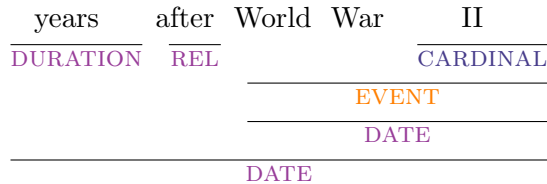
‘End of the first half’ of the football game. Here, we raise this to **DATE** assuming that we know when the first half is, even if the specific reference to the game itself has been elided. Note that the ‘**REL** + **DURATION** → **DATE**’ rule still holds.



In this example, note that ‘third quarter’ isn’t raised immediately to **DATE** because there is no implied ‘last year’ immediately following it, but it is instead earlier in the sentence, which it combines with.

14.1.1.1 rel in date

In the years after World War II
‘after’ here is acting as a **REL**



Note that it raises to a **DATE** since we know when the time of WW2 was, and it is acting as a time of reference in this sentence.

Here, ‘after’ is acting as a **REL** to ‘World War II’.

We can therefore use the second of our rules of **REL** + **DURATION** → **DATE** :

$$\frac{\frac{\text{DURATION} \quad \text{REL}}{\text{DATE}}}{\text{DATE}} \quad (\text{DATE} \quad \varepsilon)$$

14.1.2 **qual** in timex

We have defined **QUAL** as a tag that changes the meaning, in most cases changing the numerical value, of an entity. We do not mark up “emotional” aspect, such as in the phrases ‘**only** 2 weeks later’.

We do mark up **QUAL** on time expressions. For example: by February at the latest mark up ‘at the latest’ as a **QUAL**

It was nearly Christmas. Meaning, it was shortly before Christmas.

$$\frac{\frac{\frac{\text{more} \quad \text{than}}{\text{QUAL}} \quad \frac{\text{30}}{\text{CARDINAL}} \quad \frac{\text{years}}{\text{DURATION}} \quad \frac{\text{ago}}{\text{REL}}}{\text{CARDINAL}}}{\text{DURATION}}{\text{DATE}}$$

$$\frac{\frac{\frac{\text{next}}{\text{REL}} \quad \frac{\text{week}}{\text{DURATION}}}{\text{DATE}} \quad \frac{\text{at the earliest}}{\text{QUAL}}}{\text{DATE}}$$

14.1.3 **Yearearlier**

Mark up ‘**yearearlier**’ or ‘**year-earlier**’ as **DATE** , since it has both **DATE** and **REL** qualities, but would, if it were two separate tokens, combine to form a **DATE** .

14.1.4 Particularly complex date examples

late afternoon New York trading yesterday
REL DURATION CITY DATE
ORGCORP
DURATION
DURATION
DATE

In this case, we only include ‘trading’ because it is within the date span. **trading** does carry specific time information (e.g. time zone and particular working hours) for those who are familiar with the specifics of that particular company, for instance, meaning 9:30 to 4:30. However, we do not assume this level of knowledge for every company referenced, so do not explicitly mark it up on its own.

year – earlier second quarter , ended Sept. 30
REL ORDINAL DURATION REL MONTH NUMDAY
DATE DATE
DATE

seven Supreme Court terms from the fall of 1962 through the spring of 1967
CARDINAL GOVERNMENT DURATION SEASON YEAR SEASON YEAR
DURATION DATE DATE
DURATION DATE

Now In the phrase, **several years now**, mark up ‘now’ as a **REL** .

Last : Last is often used outside of **TIMEX** entities. In these cases, do not mark it up. For example, do not mark up ‘last’ in **at last count** .

day to day Day to day, year-to-year can be **DATE:OTHER** or **PERIODIC** based on context of sentence.

Tokenisation issues: Mark up the entire token as the entity. Do not split up part of the word (i.e. the section before or after a hyphen). dollar-denominated mark up as one **UNIT** token.

15 Rule Distribution

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rule	children	count	of	% total	cumul've
MONEY	→ UNIT + CARDINAL	9021	12580	9.73%	9.73%
CARDINAL	→ CARDINAL + MULT	7470	10103	8.06%	17.79%
PERCENT	→ CARDINAL + UNIT	6038	6510	6.51%	24.30%
PER	→ HON + NAME	5367	14911	5.79%	30.09%
ORG:CORP	→ NAME	5001	14664	5.39%	35.48%
PER	→ FIRST + NAME	4572	14911	4.93%	40.41%
DATE	→ REL + DURATION	3261	14977	3.52%	43.93%
DURATION	→ CARDINAL + DURATION	2532	4081	2.73%	46.66%
DATE	→ YEAR	2190	14977	2.36%	49.02%
ORG:CORP	→ o + CORP JARGON	2002	14664	2.16%	51.18%
CARDINAL	→ QUAL + CARDINAL	1939	10103	2.09%	53.27%
MONEY	→ CARDINAL + UNIT	1880	12580	2.03%	55.30%
IPOINTS	→ CARDINAL	1863	2221	2.01%	57.31%
PER	→ NAME	1686	14911	1.82%	59.13%
RATE	→ MONEY + o	1410	2107	1.52%	60.65%
PER	→ ROLE + PER	1391	14911	1.50%	62.15%
DATE	→ MONTH	1281	14977	1.38%	63.53%
ORG:CORP	→ NAME + o	1219	14664	1.31%	64.84%
DATE	→ DAY	1144	14977	1.23%	66.08%
NAME	→ NAME + NAME	1144	2600	1.23%	67.31%
ORG:CORP	→ NAME + o + CORP JARGON	1139	14664	1.23%	68.54%
DATE	→ DURATION + REL	1070	14977	1.15%	69.69%
DURATION	→ CARDINAL	1068	4081	1.15%	70.84%
MONEY	→ QUAL + MONEY	1014	12580	1.09%	71.94%
DATE	→ MONTH + NUMDAY	953	14977	1.03%	72.97%
ORG:CORP	→ NAME + CORP JARGON	909	14664	0.98%	73.95%
PER	→ FIRST + INI + NAME	839	14911	0.90%	74.85%
DATE	→ ORDINAL + DURATION	509	14977	0.55%	75.40%
DATE	→ DURATION	507	14977	0.55%	75.95%
DATE	→ REL + DATE	499	14977	0.54%	76.48%
NAME	→ NAME + o + NAME	489	2600	0.53%	77.01%
ORG:CORP	→ CITY	482	14664	0.52%	77.53%
ORG:CORP	→ CITY + o	465	14664	0.50%	78.03%
ORG:CORP	→ NATIONALITY + o	371	14664	0.40%	78.43%
DATE	→ MONTH + NUMDAY + o + YEAR	344	14977	0.37%	78.80%
GRP:ORG	→ STREET	340	401	0.37%	79.17%

rule	children	count	of	% total	cumul've
IPOINTS	→ CARDINAL + UNIT	315	2221	0.34%	79.51%
DATE	→ MONTH + YEAR	314	14977	0.34%	79.85%
MEDIA	→ NAME	290	661	0.31%	80.16%
CARDINAL	→ CARDINAL + o + CARDINAL	284	10103	0.31%	80.47%
NAME	→ FIRST + NAME	280	2600	0.30%	80.77%
ORG:CORP	→ MEDIA	274	14664	0.30%	81.07%
PER	→ FIRST	239	14911	0.26%	81.32%
GOVERNMENT	→ BUILDING	233	837	0.25%	81.58%
AGE	→ CARDINAL	228	438	0.25%	81.82%
CARDINAL	→ MULT	224	10103	0.24%	82.06%
NAME	→ NAME + NAME + NAME	216	2600	0.23%	82.30%
DATE	→ REL + MONTH	208	14977	0.22%	82.52%
MONEY	→ MONEY + o + MONEY	194	12580	0.21%	82.73%
NAME	→ INI + NAME	191	2600	0.21%	82.94%
PERCENT	→ PERCENT + o + PERCENT	189	6510	0.20%	83.14%
UNIT	→ NATIONALITY + UNIT	184	218	0.20%	83.34%
DATE	→ REL + DAY	181	14977	0.20%	83.53%
DATE	→ REL + SEASON	180	14977	0.19%	83.73%
INDEX	→ MEDIA + o	169	535	0.18%	83.91%
PER	→ FIRST + MIDDLE + NAME	162	14911	0.17%	84.08%
MONEY	→ CARDINAL	157	12580	0.17%	84.25%
ORG:CORP	→ o + CORP JARGON + o	151	14664	0.16%	84.42%
ORG:CORP	→ STATE + o	149	14664	0.16%	84.58%
WEIGHT	→ CARDINAL + UNIT	143	273	0.15%	84.73%
DATE	→ REL + o + DURATION	143	14977	0.15%	84.88%
ROLE	→ GOVERNMENT + ROLE	143	629	0.15%	85.04%
ORG:CORP	→ NAME + o + CORP JARGON + o	137	14664	0.15%	85.19%
PERCENT	→ QUAL + CARDINAL + UNIT	133	6510	0.14%	85.33%
GOVERNMENT	→ NATIONALITY + o	129	837	0.14%	85.47%
ORG:CORP	→ o + COUNTRY	128	14664	0.14%	85.61%
ORG:CORP	→ NATIONALITY + o + CORP JARGON	124	14664	0.13%	85.74%
DATE	→ EVENT	117	14977	0.13%	85.87%
QUANTITY:1D	→ CARDINAL + UNIT	116	156	0.13%	85.99%
INDEX	→ ORG:CORP + o	116	535	0.13%	86.12%
RATE	→ MONEY + o + DURATION	112	2107	0.12%	86.24%
DATE	→ o + YEAR	111	14977	0.12%	86.36%
DATE	→ DURATION + o + DATE	107	14977	0.12%	86.47%
LAW	→ o + CARDINAL	100	221	0.11%	86.58%
DATE	→ REL + o + DATE	96	14977	0.10%	86.68%

rule	children	count	of	% total	cumul've
AGE	→ CARDINAL + DURATION + o	93	438	0.10%	86.79%
PERIODIC	→ o + DURATION	93	175	0.10%	86.89%
ROLE	→ o + ROLE	92	629	0.10%	86.98%
WEIGHT	→ UNIT	92	273	0.10%	87.08%
ROLE	→ ORG:CORP + ROLE	91	629	0.10%	87.18%
RATE	→ MONEY	90	2107	0.10%	87.28%
FOLD	→ CARDINAL + o	88	146	0.09%	87.37%
RATE	→ MONEY + o + WEIGHT	84	2107	0.09%	87.46%
DATE	→ DATE + DURATION	83	14977	0.09%	87.55%
INDEX	→ ORG:CORP + CARDINAL	83	535	0.09%	87.64%
QUANTITY:3D	→ CARDINAL + UNIT	82	143	0.09%	87.73%
DATE	→ ORDINAL + DURATION + o + DATE	80	14977	0.09%	87.82%
MEDIA	→ MEDIA + o	79	661	0.09%	87.90%
ORG:CORP	→ o + NAME	76	14664	0.08%	87.99%
ORG:CORP	→ ORDINAL + o	76	14664	0.08%	88.07%
HURRICANE	→ o + FIRST	76	104	0.08%	88.15%
PER	→ FIRST + INI + NAME + NAMEMOD	76	14911	0.08%	88.23%
GOVERNMENT	→ STATE + o	75	837	0.08%	88.31%
ROLE	→ NATIONALITY + ROLE	75	629	0.08%	88.39%
DATE	→ CARDINAL + DURATION	75	14977	0.08%	88.47%
DURATION	→ CARDINAL + o + DURATION	74	4081	0.08%	88.55%
ORG:EDU	→ NAME + o	73	330	0.08%	88.63%
DATE	→ DAY + DURATION	72	14977	0.08%	88.71%
PER	→ INI + MIDDLE + NAME	72	14911	0.08%	88.79%
GOVERNMENT	→ CITY	71	837	0.08%	88.86%
GOVERNMENT	→ GOVERNMENT + o	70	837	0.08%	88.94%
GRP:PER	→ NAME	70	124	0.08%	89.02%
ORG:OTHER	→ NATIONALITY + o	65	316	0.07%	89.09%
DATE	→ SEASON	63	14977	0.07%	89.15%
MEDIA	→ CITY + o	62	661	0.07%	89.22%
RATE	→ UNIT + o	62	2107	0.07%	89.29%
ORG:EDU	→ NAME	62	330	0.07%	89.35%
MONEY	→ QUAL + UNIT + CARDINAL	62	12580	0.07%	89.42%
ORG:CORP	→ NAME + CORP JARGON + o	61	14664	0.07%	89.49%
MONEY	→ CARDINAL + o + UNIT	61	12580	0.07%	89.55%
CARDINAL	→ CARDINAL + QUAL	60	10103	0.06%	89.62%
NAME	→ NAME + o + NAME + o + NAME	59	2600	0.06%	89.68%
RATE	→ CARDINAL + o + DURATION	59	2107	0.06%	89.74%
PERCENT	→ QUAL + PERCENT	58	6510	0.06%	89.81%

rule	children	count	of	% total	cumul've
PER	→ HON + FIRST	55	14911	0.06%	89.87%
FOLD	→ QUAL + FOLD	55	146	0.06%	89.93%
CARDINAL	→ QUAL + o + CARDINAL	55	10103	0.06%	89.99%
DATE	→ o + DURATION	55	14977	0.06%	90.04%
DATE	→ REL + YEAR	54	14977	0.06%	90.10%
PER	→ ROLE + FIRST + INI + NAME	54	14911	0.06%	90.16%
REGION	→ o + CONTINENT	54	185	0.06%	90.22%
ORG:CORP	→ CITY + o + CORP JARGON	52	14664	0.06%	90.28%
DATE	→ DATE + o + DATE	52	14977	0.06%	90.33%
REGION	→ o + STATE	52	185	0.06%	90.39%
MEDIA	→ o + GRP:ORG + o	51	661	0.06%	90.44%
RATE	→ MONEY + o + UNIT	51	2107	0.06%	90.50%
ORG:EDU	→ o + STATE	50	330	0.05%	90.55%
INDEX	→ ORG:CORP + CARDINAL + o	50	535	0.05%	90.61%
DURATION	→ ORDINAL + DURATION	50	4081	0.05%	90.66%
ORG:CORP	→ REGION + o	49	14664	0.05%	90.71%
PER	→ NICKNAME	47	14911	0.05%	90.76%
ORG:CORP	→ o + CITY	47	14664	0.05%	90.81%
DURATION	→ QUAL + o + DURATION	46	4081	0.05%	90.86%
GRP:PER	→ NAME + o	45	124	0.05%	90.91%
ORG:CORP	→ ORG:CORP + o	45	14664	0.05%	90.96%
ORG:CORP	→ ORDINAL + CITY	45	14664	0.05%	91.01%
ORG:CORP	→ ORDINAL + CITY + CORP JARGON	45	14664	0.05%	91.06%
ORG:CORP	→ MEDIA + CORP JARGON	43	14664	0.05%	91.10%
GOVERNMENT	→ NORP:OTHER + o	43	837	0.05%	91.15%
STREET	→ NAME + o	43	92	0.05%	91.20%
ORG:CORP	→ o + NAME + o	43	14664	0.05%	91.24%
RATE	→ MONEY + o + QUANTITY:3D	43	2107	0.05%	91.29%
TIME	→ CARDINAL + o	42	98	0.05%	91.33%
ORG:CORP	→ o + STATE	42	14664	0.05%	91.38%
DATE	→ ORDINAL + DURATION + o + YEAR	41	14977	0.04%	91.42%
EVENT	→ o + DAY	41	148	0.04%	91.47%
PER	→ FIRST + NAME + NAMEMOD	40	14911	0.04%	91.51%
ORG:OTHER	→ CITY + o	40	316	0.04%	91.55%
ORG:CORP	→ COUNTRY + o	40	14664	0.04%	91.60%
ORG:CORP	→ STATE + o + CORP JARGON	40	14664	0.04%	91.64%
NAME	→ FIRST + INI + NAME	40	2600	0.04%	91.68%
PER	→ INI + NAME	39	14911	0.04%	91.73%
PER	→ HON + FIRST + NAME	38	14911	0.04%	91.77%

rule	children	count	of	% total	cumul've
ORG:OTHER	→ NAME + o	38	316	0.04%	91.81%
ORG:CORP	→ NAME + o + NAME + o + CORP JARGON	38	14664	0.04%	91.85%
SPORTS TEAM	→ CITY + o	38	68	0.04%	91.89%
DATE	→ QUAL + DATE	37	14977	0.04%	91.93%
INDEX	→ MEDIA	37	535	0.04%	91.97%
RATE	→ QUANTITY:3D + o + DURATION	36	2107	0.04%	92.01%
DURATION	→ REL + DURATION	36	4081	0.04%	92.05%
QUANTITY:2D	→ CARDINAL + UNIT	35	54	0.04%	92.08%
DATE	→ REL + o + MONTH	34	14977	0.04%	92.12%
DATE	→ REL + o + YEAR	34	14977	0.04%	92.16%
MONEY	→ UNIT	33	12580	0.04%	92.19%
AGE	→ o + CARDINAL	33	438	0.04%	92.23%
LOCATION:OTHER	→ CITY + o	33	72	0.04%	92.27%
ORG:CORP	→ REGION	33	14664	0.04%	92.30%
ORG:POLITICAL	→ NORP:OTHER + o	32	74	0.03%	92.34%
DURATION	→ QUAL + DURATION	32	4081	0.03%	92.37%
AGE	→ DURATION + o	32	438	0.03%	92.40%
ORG:CORP	→ NORP:OTHER + o	32	14664	0.03%	92.44%
ORG:EDU	→ STATE + o	32	330	0.03%	92.47%
ORG:CORP	→ OCEAN + o	31	14664	0.03%	92.51%
VEHICLE	→ NAME	31	124	0.03%	92.54%
QUANTITY:3D	→ UNIT	31	143	0.03%	92.57%
ELECTRONICS	→ CARDINAL	30	58	0.03%	92.61%
ORG:CORP	→ o + COUNTRY + CORP JARGON	30	14664	0.03%	92.64%
VEHICLE	→ ORG:CORP + o	30	124	0.03%	92.67%
DATE	→ REL + CARDINAL + DURATION	29	14977	0.03%	92.70%
GOVERNMENT	→ o + COUNTRY	29	837	0.03%	92.73%
ORG:CORP	→ MEDIA + NAME	29	14664	0.03%	92.76%
DATE	→ DAY + o + MONTH + NUMDAY + o + YEAR	29	14977	0.03%	92.80%
GOVERNMENT	→ CITY + o	28	837	0.03%	92.83%
NAME	→ INI + MIDDLE + NAME	28	2600	0.03%	92.86%
ORG:EDU	→ CITY + o	27	330	0.03%	92.89%
ROLE	→ GOVERNMENT + o	27	629	0.03%	92.91%
DURATION	→ DURATION + o + DURATION	27	4081	0.03%	92.94%
HURRICANE	→ FIRST	26	104	0.03%	92.97%
MONEY	→ MONEY + QUAL	26	12580	0.03%	93.00%
ORG:POLITICAL	→ NORP:POLITICAL + o	26	74	0.03%	93.03%
MEDIA	→ o + CORP JARGON	26	661	0.03%	93.06%
MEDIA	→ NATIONALITY + o	26	661	0.03%	93.08%

rule	children	count	of	% total	cumul've
WAR	→ o + CARDINAL	26	41	0.03%	93.11%
DATE	→ ORDINAL + CARDINAL + DURATION	25	14977	0.03%	93.14%
LAW	→ NAME	25	221	0.03%	93.17%
RATE	→ PERCENT + o + DURATION	24	2107	0.03%	93.19%
DURATION	→ ORG:CORP + o	24	4081	0.03%	93.22%
ORG:CORP	→ o + NATIONALITY	24	14664	0.03%	93.24%
ORG:CORP	→ o + NAME + o + JARGON	24	14664	0.03%	93.27%
MEDIA	→ NAME + o	24	661	0.03%	93.30%
DATE	→ o + DURATION + o + DATE	24	14977	0.03%	93.32%
DATE	→ CARDINAL	24	14977	0.03%	93.35%
NORP:OTHER	→ OCEAN	23	54	0.02%	93.37%
PER	→ NAME + FIRST	23	14911	0.02%	93.40%
RATE	→ DURATION + o + DURATION	23	2107	0.02%	93.42%
DATE	→ DATE + o + ORDINAL + DURATION	23	14977	0.02%	93.45%
DATE	→ DURATION + o + MONTH + NUMDAY	23	14977	0.02%	93.47%
GRP:ORG	→ o + CARDINAL	23	401	0.02%	93.50%
ORG:EDU	→ o + CITY	22	330	0.02%	93.52%
PRODUCT:OTHER	→ NAME	22	161	0.02%	93.54%
ROLE	→ ROLE + o + GOVERNMENT	22	629	0.02%	93.57%
ROLE	→ NORP:POLITICAL + ROLE	22	629	0.02%	93.59%
ORG:CORP	→ o + NAME + CORP JARGON	21	14664	0.02%	93.61%
VEHICLE	→ CARDINAL	21	124	0.02%	93.64%
BUILDING	→ NAME + o	21	55	0.02%	93.66%
DATE	→ ORDINAL + o + DURATION	21	14977	0.02%	93.68%
PRODUCT:OTHER	→ LOCATION:OTHER	21	161	0.02%	93.70%
GOVERNMENT	→ o + CORP JARGON	21	837	0.02%	93.73%
ROLE	→ ROLE + o	21	629	0.02%	93.75%
NORP:OTHER	→ o + NORP:OTHER	21	54	0.02%	93.77%
DATE	→ DURATION + DATE	20	14977	0.02%	93.79%
DATE:OTHER	→ o + DURATION	20	46	0.02%	93.81%
GOVERNMENT	→ NAME + o	20	837	0.02%	93.84%
ORG:CORP	→ NAME + o + NAME	20	14664	0.02%	93.86%
NAME	→ NAME + NAME + o + NAME	20	2600	0.02%	93.88%
ORG:CORP	→ o + REGION	20	14664	0.02%	93.90%
DATE	→ o + ORDINAL + DURATION	20	14977	0.02%	93.92%
POINTS	→ CARDINAL + UNIT	20	24	0.02%	93.94%
MULT	→ MULT + o + MULT	20	20	0.02%	93.97%
ORG:EDU	→ ORG:EDU + o	19	330	0.02%	93.99%
ORG:OTHER	→ STATE + o	19	316	0.02%	94.01%

rule	children	count	of	% total	cumul've
DATE	→ YEAR + o + YEAR	19	14977	0.02%	94.03%
DATE	→ ORDINAL + CARDINAL + DURATION + o + DATE	19	14977	0.02%	94.05%
MONEY	→ QUAL + MONEY + o + MONEY	19	12580	0.02%	94.07%
DATE	→ QUAL + DURATION	19	14977	0.02%	94.09%
LAW	→ ORDINAL + o	19	221	0.02%	94.11%
PRODUCT:OTHER	→ o + CARDINAL	18	161	0.02%	94.13%
STREET	→ ORDINAL + o	18	92	0.02%	94.15%
ORG:OTHER	→ NAME	18	316	0.02%	94.17%
ORG:CORP	→ o + CITY + CORP JARGON	18	14664	0.02%	94.19%
ORDINAL	→ o + CARDINAL	18	30	0.02%	94.21%
GRP:ORG	→ CITY	17	401	0.02%	94.22%
DATE	→ CARDINAL + DURATION + REL	17	14977	0.02%	94.24%
ORG:OTHER	→ o + COUNTRY	17	316	0.02%	94.26%
FIRST	→ FIRST + o + FIRST	17	25	0.02%	94.28%
ORG:CORP	→ NAME + o + COUNTRY + o + CORP JARGON	17	14664	0.02%	94.30%
MEDIA	→ MEDIA + CORP JARGON	17	661	0.02%	94.32%
EVENT	→ YEAR + o	17	148	0.02%	94.33%
DATE	→ YEAR + ORDINAL + DURATION	17	14977	0.02%	94.35%
ROLE	→ STATE + ROLE	17	629	0.02%	94.37%
ORG:CORP	→ CITY + OCEAN	17	14664	0.02%	94.39%
DATE	→ YEAR + DURATION	17	14977	0.02%	94.41%
LOCATION:OTHER	→ NAME + o	17	72	0.02%	94.43%
QUANTITY:3D	→ CARDINAL + MULT + UNIT	17	143	0.02%	94.44%
WEIGHT	→ CARDINAL + MULT + UNIT	16	273	0.02%	94.46%
QUANTITY:OTHER	→ CARDINAL + UNIT	16	30	0.02%	94.48%
SPORTS TEAM	→ CITY	16	68	0.02%	94.50%
ORG:CORP	→ ORDINAL + o + CORP JARGON	16	14664	0.02%	94.51%
PERCENT	→ CARDINAL + o + UNIT	16	6510	0.02%	94.53%
ORG:CORP	→ o + CORP JARGON + CORP JARGON	16	14664	0.02%	94.55%
PERCENT	→ PERCENT + QUAL	16	6510	0.02%	94.57%
INDEX	→ ORG:CORP	16	535	0.02%	94.58%
DATE	→ TIME + DATE	16	14977	0.02%	94.60%
GOVERNMENT	→ LOCATION:OTHER	16	837	0.02%	94.62%
ORG:CORP	→ o + OCEAN	16	14664	0.02%	94.63%
DATE	→ DURATION + o + REL	15	14977	0.02%	94.65%
QUANTITY:1D	→ UNIT	15	156	0.02%	94.67%
MONEY	→ CARDINAL + MULT	15	12580	0.02%	94.68%
DATE	→ DAY + o + MONTH + NUMDAY	15	14977	0.02%	94.70%
ORG:CORP	→ MEDIA + NAME + CORP JARGON	15	14664	0.02%	94.72%

rule	children	count	of	% total	cumul've
ORG:CORP	→ OCEAN + o + CORP JARGON	15	14664	0.02%	94.73%
DURATION	→ DURATION + QUAL	15	4081	0.02%	94.75%
PERCENT	→ CARDINAL	15	6510	0.02%	94.76%
ORG:CORP	→ NATIONALITY	14	14664	0.02%	94.78%
ORG:CORP	→ REGION + o + CORP JARGON	14	14664	0.02%	94.79%
AIRPORT	→ NAME + o	14	28	0.02%	94.81%
DATE	→ REL + REL + DURATION	14	14977	0.02%	94.82%
GRP:LOC	→ ORDINAL + o	14	18	0.02%	94.84%
RATE	→ MONEY + o + MONEY + o	14	2107	0.02%	94.85%
TIME	→ QUAL + TIME	14	98	0.02%	94.87%
DATE	→ DURATION + o + YEAR	14	14977	0.02%	94.88%
ORG:CORP	→ NAME + COUNTRY	14	14664	0.02%	94.90%
TV SHOW	→ NAME	14	67	0.02%	94.91%
ORG:OTHER	→ COUNTRY + o	13	316	0.01%	94.93%
FUND	→ NAME + o	13	34	0.01%	94.94%
BRIDGE	→ LOCATION:OTHER + o	13	22	0.01%	94.96%
DATE	→ o + ORDINAL + DURATION + o + DATE	13	14977	0.01%	94.97%
DATE	→ DURATION + o + DAY	13	14977	0.01%	94.99%
DURATION	→ DURATION + DURATION	13	4081	0.01%	95.00%
ORG:CORP	→ NAME + CORP JARGON + CORP JARGON	13	14664	0.01%	95.01%
MONTH	→ UNIT + CARDINAL	13	29	0.01%	95.03%
ORG:CORP	→ o + CARDINAL	13	14664	0.01%	95.04%
PER	→ HON + MIDDLE + NAME	13	14911	0.01%	95.06%
FACILITY	→ CITY + o	13	67	0.01%	95.07%
DATE	→ REL	13	14977	0.01%	95.08%
DATE	→ QUAL + o + DATE	13	14977	0.01%	95.10%
ORG:CORP	→ LOCATION:OTHER	13	14664	0.01%	95.11%
RATE	→ MONEY + o + MONEY	13	2107	0.01%	95.13%
REGION	→ o + COUNTRY	13	185	0.01%	95.14%
ORG:CORP	→ CITY + CORP JARGON	13	14664	0.01%	95.15%
ORG:CORP	→ o + CORP JARGON + o + COUNTRY	13	14664	0.01%	95.17%
NAME	→ NAME + o + NAME + o + NAME + o + NAME	13	2600	0.01%	95.18%
ORG:CORP	→ MEDIA + o	13	14664	0.01%	95.20%
AGE	→ QUAL + AGE	12	438	0.01%	95.21%
NAME	→ HON + FIRST	12	2600	0.01%	95.22%
GRP:ORG	→ SUBURB	12	401	0.01%	95.23%
ORG:CORP	→ NAME + OCEAN	12	14664	0.01%	95.25%
DATE	→ DAY + o + NUMDAY	12	14977	0.01%	95.26%
ORG:CORP	→ o + NATIONALITY + o	12	14664	0.01%	95.27%

rule	children	count	of	% total	cumul've
PER	→ ROLE + FIRST	12	14911	0.01%	95.29%
DURATION	→ QUAL + CARDINAL + DURATION	12	4081	0.01%	95.30%
PRODUCT:OTHER	→ NAME + o	12	161	0.01%	95.31%
STREET	→ o + CARDINAL	12	92	0.01%	95.32%
MEDIA	→ o + CONTINENT	12	661	0.01%	95.34%
REGION	→ OCEAN	12	185	0.01%	95.35%
ORG:OTHER	→ NORP:OTHER + o	12	316	0.01%	95.36%
DATE	→ ORDINAL + CARDINAL + DURATION + o + YEAR	12	14977	0.01%	95.38%
ORG:CORP	→ NAME + NAME	11	14664	0.01%	95.39%
MONEY	→ QUAL + UNIT + CARDINAL + MULT	11	12580	0.01%	95.40%
DATE	→ REL + DURATION + DAY	11	14977	0.01%	95.41%
DATE	→ ORDINAL + DURATION + o	11	14977	0.01%	95.42%
ORG:CORP	→ o + OCEAN + CORP JARGON	11	14664	0.01%	95.44%
ORG:CORP	→ NAME + STREET	11	14664	0.01%	95.45%
DATE	→ QUAL + o + DURATION	11	14977	0.01%	95.46%
ORG:CORP	→ NORP:OTHER + CORP JARGON	11	14664	0.01%	95.47%
DURATION	→ o + ORG:CORP	11	4081	0.01%	95.48%
ORG:CORP	→ MEDIA + o + CORP JARGON	11	14664	0.01%	95.50%
ENERGY	→ CARDINAL + UNIT	11	13	0.01%	95.51%
ORG:CORP	→ STATE	11	14664	0.01%	95.52%
EVENT	→ CITY + o	11	148	0.01%	95.53%
DATE	→ DATE + QUAL	11	14977	0.01%	95.54%
DURATION	→ DURATION + REL	11	4081	0.01%	95.55%
ORG:CORP	→ o + NAME + o + CORP JARGON	11	14664	0.01%	95.57%
PERIODIC	→ DAY	11	175	0.01%	95.58%
DATE:OTHER	→ REL + DURATION	11	46	0.01%	95.59%
ORG:OTHER	→ o + CORP JARGON	11	316	0.01%	95.60%
ORG:CORP	→ o + ORDINAL + CITY	11	14664	0.01%	95.61%
ORG:CORP	→ NAME + o + COUNTRY	11	14664	0.01%	95.63%
WEIGHT	→ CARDINAL + o + UNIT	11	273	0.01%	95.64%
ORG:CORP	→ HOTEL	11	14664	0.01%	95.65%
ORG:CORP	→ o + STATE + o	11	14664	0.01%	95.66%
ORDINAL	→ ORDINAL + o + ORDINAL	10	30	0.01%	95.67%
PRODUCT:OTHER	→ REGION + o	10	161	0.01%	95.68%
NICKNAME	→ o + FIRST	10	14	0.01%	95.69%
IPOINTS	→ UNIT	10	2221	0.01%	95.70%
FACILITY	→ CITY	10	67	0.01%	95.72%
ORG:CORP	→ o + NORP:OTHER	10	14664	0.01%	95.73%
LAW	→ NATIONALITY + o	10	221	0.01%	95.74%

rule	children	count	of	% total	cumul've
DATE	→ DURATION + REL + DATE	10	14977	0.01%	95.75%
PRODUCT:OTHER	→ ORG:CORP + o	10	161	0.01%	95.76%
RIVER	→ NAME + o	10	21	0.01%	95.77%
DATE	→ DATE + o + DURATION	10	14977	0.01%	95.78%
NAME	→ NAME + NAME + NAME + o + NAME	10	2600	0.01%	95.79%
DATE	→ REL + DURATION + DATE	10	14977	0.01%	95.80%
LAW	→ NAME + o	10	221	0.01%	95.81%
ORG:CORP	→ NAME + o + NAME + o + NAME	10	14664	0.01%	95.82%
ROLE	→ NATIONALITY + o	10	629	0.01%	95.83%
BUILDING	→ ORG:CORP + o	10	55	0.01%	95.84%
VEHICLE	→ ORG:CORP + VEHICLE	10	124	0.01%	95.86%
ORG:CORP	→ ORG:CORP + o + CORP JARGON	10	14664	0.01%	95.87%
ORG:EDU	→ CITY	10	330	0.01%	95.88%
ORG:CORP	→ CORP JARGON + o	9	14664	0.01%	95.89%
NAME	→ INI + NAME + NAME	9	2600	0.01%	95.90%
GOVERNMENT	→ ORDINAL + o	9	837	0.01%	95.91%
ELECTRONICS	→ ORG:CORP + CARDINAL	9	58	0.01%	95.92%
EVENT	→ DATE	9	148	0.01%	95.93%
ORG:CORP	→ NAME + o + NAME + CORP JARGON	9	14664	0.01%	95.94%
ELECTRONICS	→ ORG:CORP + o	9	58	0.01%	95.94%
PER	→ ROLE + FIRST + MIDDLE + NAME	9	14911	0.01%	95.95%
DATE	→ YEAR + o + DURATION	9	14977	0.01%	95.96%
DATE	→ MONTH + CARDINAL	9	14977	0.01%	95.97%
REGION	→ LOCATION:OTHER + o	9	185	0.01%	95.98%
INDEX	→ ORG:CORP + GOVERNMENT + o	9	535	0.01%	95.99%
MEDIA	→ GRP:ORG + o	9	661	0.01%	96.00%
DURATION	→ o + DURATION	9	4081	0.01%	96.01%
GOVERNMENT	→ NATIONALITY + GOVERNMENT	9	837	0.01%	96.02%
GOVERNMENT	→ COUNTRY + o	9	837	0.01%	96.03%
SPORTS TEAM	→ CITY + SPORTS TEAM	9	68	0.01%	96.04%
NAMEMOD	→ CARDINAL	9	9	0.01%	96.05%
AGE	→ AGE + QUAL	9	438	0.01%	96.06%
ORG:CORP	→ LOCATION:OTHER + o	9	14664	0.01%	96.07%
DATE	→ TIME + DAY	9	14977	0.01%	96.08%
PERIODIC	→ DURATION + o + DURATION	9	175	0.01%	96.09%
PERCENT	→ QUAL + PERCENT + o + PERCENT	9	6510	0.01%	96.10%
ROLE	→ ORG:POLITICAL + ROLE	8	629	0.01%	96.11%
TIME	→ CARDINAL + DURATION	8	98	0.01%	96.12%
DATE	→ SEASON + o + YEAR	8	14977	0.01%	96.13%

rule	children	count	of	% total	cumul've
ORG:CORP	→ NORP:OTHER + o + CORP JARGON	8	14664	0.01%	96.13%
NAME	→ NAME + NAME + o + NAME + NAME	8	2600	0.01%	96.14%
ROLE	→ ORG:CORP + o	8	629	0.01%	96.15%
DATE	→ MONTH + o + DATE	8	14977	0.01%	96.16%
FACILITY	→ NAME + o	8	67	0.01%	96.17%
HOSPITAL	→ NAME + o	8	22	0.01%	96.18%
LAW	→ CITY + o	8	221	0.01%	96.19%
UNIT	→ CARDINAL	8	218	0.01%	96.20%
IPOINTS	→ QUAL + IPOINTS	8	2221	0.01%	96.20%
NUMDAY	→ NUMDAY + o + NUMDAY	8	11	0.01%	96.21%
IPOINTS	→ CARDINAL + o + UNIT	8	2221	0.01%	96.22%
DATE	→ QUAL + YEAR	8	14977	0.01%	96.23%
DATE	→ REL + MONTH + NUMDAY	8	14977	0.01%	96.24%
ORG:CORP	→ NATIONALITY + OCEAN	8	14664	0.01%	96.25%
DISEASE	→ NAME + o	8	8	0.01%	96.26%
FACILITY	→ LOCATION:OTHER	8	67	0.01%	96.26%
ORG:CORP	→ COUNTRY + o + CORP JARGON	8	14664	0.01%	96.27%
UNIT	→ NATIONALITY + o	8	218	0.01%	96.28%
QUANTITY:OTHER	→ CARDINAL + o + UNIT	8	30	0.01%	96.29%
TV SHOW	→ NICKNAME	8	67	0.01%	96.30%
REGION	→ NAME + o	8	185	0.01%	96.31%
VEHICLE	→ o + CARDINAL	7	124	0.01%	96.31%
NAME	→ FIRST	7	2600	0.01%	96.32%
PER	→ FIRST + o + NAME	7	14911	0.01%	96.33%
DATE	→ DATE + ORDINAL + DURATION	7	14977	0.01%	96.34%
LAW	→ o + CARDINAL + o + LAW	7	221	0.01%	96.34%
DATE	→ DURATION + o + MONTH + NUMDAY + o + YEAR	7	14977	0.01%	96.35%
DATE	→ ORDINAL + DURATION + DATE	7	14977	0.01%	96.36%
ORG:CORP	→ ORDINAL + o + CITY	7	14664	0.01%	96.37%
ORG:CORP	→ GPE + o + CORP JARGON	7	14664	0.01%	96.38%
DATE	→ DURATION + o	7	14977	0.01%	96.38%
DATE	→ o + DURATION + o + MONTH + NUMDAY	7	14977	0.01%	96.39%
GOVERNMENT	→ NAME	7	837	0.01%	96.40%
EVENT	→ NATIONALITY + o	7	148	0.01%	96.41%
FUND	→ ORG:CORP + o	7	34	0.01%	96.41%
WAR	→ COUNTRY	7	41	0.01%	96.42%
LAW	→ ORDINAL	7	221	0.01%	96.43%
EVENT	→ DATE + o	7	148	0.01%	96.44%
QUANTITY:1D	→ CARDINAL + o + UNIT	7	156	0.01%	96.44%

rule	children	count	of	% total	cumul've
RATE	→ WEIGHT + o + DURATION	7	2107	0.01%	96.45%
PER	→ FIRST + NAMEMOD	7	14911	0.01%	96.46%
DATE	→ DURATION + DAY	7	14977	0.01%	96.47%
ORG:CORP	→ CITY + OCEAN + o	7	14664	0.01%	96.47%
MEDIA	→ COUNTRY + o	7	661	0.01%	96.48%
DATE	→ DURATION + o + MONTH	7	14977	0.01%	96.49%
DATE	→ CARDINAL + o + DURATION	7	14977	0.01%	96.50%
HOTEL	→ NAME + o	7	28	0.01%	96.50%
PER	→ INI + MIDDLE + NAME + NAMEMOD	7	14911	0.01%	96.51%
ROLE	→ ORG:OTHER + ROLE	7	629	0.01%	96.52%
REGION	→ COUNTRY + o	7	185	0.01%	96.53%
PERIODIC	→ o + DATE	7	175	0.01%	96.53%
BUILDING	→ NAME	7	55	0.01%	96.54%
NAME	→ NAME + NAME + NAME + NAME	7	2600	0.01%	96.55%
NAME	→ FIRST + o + NAME	7	2600	0.01%	96.56%
PER	→ ROLE	7	14911	0.01%	96.56%
ORG:CORP	→ ORDINAL + CITY + CORP JARGON + o	7	14664	0.01%	96.57%
ARMY	→ NATIONALITY + o	7	16	0.01%	96.58%
DATE	→ SEASON + YEAR	7	14977	0.01%	96.59%
ORG:CORP	→ NAME + o + CORP JARGON + CORP JARGON	7	14664	0.01%	96.59%
ORG:CORP	→ NAME + o + CITY	7	14664	0.01%	96.60%
ORG:CORP	→ o + GPE + CORP JARGON	6	14664	0.01%	96.61%
HOSPITAL	→ ORDINAL + o	6	22	0.01%	96.61%
ORG:OTHER	→ MEDIA	6	316	0.01%	96.62%
DURATION	→ DURATION + o	6	4081	0.01%	96.63%
ORG:CORP	→ OCEAN + NAME	6	14664	0.01%	96.63%
HOTEL	→ NAME	6	28	0.01%	96.64%
AIRPORT	→ NAME	6	28	0.01%	96.65%
VEHICLE	→ ORG:CORP	6	124	0.01%	96.65%
FACILITY	→ o + CARDINAL	6	67	0.01%	96.66%
ORG:OTHER	→ o + NATIONALITY + o	6	316	0.01%	96.67%
ROLE	→ o + GOVERNMENT	6	629	0.01%	96.67%
INDEX	→ NAME + o	6	535	0.01%	96.68%
ORG:CORP	→ NAME + COUNTRY + CORP JARGON	6	14664	0.01%	96.69%
DATE	→ ORDINAL	6	14977	0.01%	96.69%
ORG:OTHER	→ o + CARDINAL	6	316	0.01%	96.70%
INDEX	→ NATIONALITY + o	6	535	0.01%	96.71%
ORG:CORP	→ NAME + o + CORP JARGON + o + COUNTRY + o	6	14664	0.01%	96.71%
ROLE	→ CITY + ROLE	6	629	0.01%	96.72%

rule	children	count	of	% total	cumul've
AIRPORT	→ CITY + o	6	28	0.01%	96.72%
ORG:CORP	→ ORDINAL + o + COUNTRY	6	14664	0.01%	96.73%
PER	→ HON	6	14911	0.01%	96.74%
ORG:CORP	→ NAME + GPE + o	6	14664	0.01%	96.74%
NAME	→ NAME + o + NAME + o + NAME + o + NAME + o	6	2600	0.01%	96.75%
	+ NAME				
ORG:CORP	→ STATE + o + CORP JARGON + o	6	14664	0.01%	96.76%
ORG:CORP	→ OCEAN	6	14664	0.01%	96.76%
DATE	→ YEAR + DATE	6	14977	0.01%	96.77%
ORG:OTHER	→ ORG:OTHER + o	6	316	0.01%	96.78%
ORG:CORP	→ NORP:OTHER	6	14664	0.01%	96.78%
DATE	→ MONTH + DURATION	6	14977	0.01%	96.79%
WAR	→ COUNTRY + o	6	41	0.01%	96.80%
BUILDING	→ CITY + o	6	55	0.01%	96.80%
INDEX	→ CITY + o	6	535	0.01%	96.81%
PERCENT	→ o + UNIT	6	6510	0.01%	96.82%
AWARD	→ NAME + o	6	14	0.01%	96.82%
DATE	→ DURATION + REL + o + DATE	6	14977	0.01%	96.83%
ORG:RELIGIOUS	→ BUILDING	6	25	0.01%	96.83%
DATE	→ o + DATE	6	14977	0.01%	96.84%
ORG:CORP	→ CITY + o + NORP:OTHER	6	14664	0.01%	96.85%
AGE	→ AGE + o + AGE	6	438	0.01%	96.85%
DURATION	→ REL + o	6	4081	0.01%	96.86%
DATE	→ ORDINAL + CARDINAL + DATE	6	14977	0.01%	96.87%
PER	→ INI	6	14911	0.01%	96.87%
QUANTITY:2D	→ CARDINAL + o + UNIT	6	54	0.01%	96.88%
SPEED	→ CARDINAL + UNIT	6	15	0.01%	96.89%
ROLE	→ ROLE + o + ROLE	6	629	0.01%	96.89%
DURATION	→ REL + CARDINAL + DURATION	6	4081	0.01%	96.90%
RATE	→ CARDINAL + o	6	2107	0.01%	96.91%
ORG:CORP	→ FIRST + NAME	6	14664	0.01%	96.91%
ORG:CORP	→ o + COUNTRY + CORP JARGON + o	5	14664	0.01%	96.92%
RIVER	→ NAME	5	21	0.01%	96.92%
CARDINAL	→ QUAL + CARDINAL + o + CARDINAL	5	10103	0.01%	96.93%
ROLE	→ MEDIA + o	5	629	0.01%	96.93%
ORG:CORP	→ o + ORDINAL + CITY + CORP JARGON	5	14664	0.01%	96.94%
DURATION	→ ORDINAL + o + DURATION	5	4081	0.01%	96.94%
ORG:CORP	→ o + OCEAN + o	5	14664	0.01%	96.95%
ORG:CORP	→ RIVER	5	14664	0.01%	96.96%

rule	children	count	of	% total	cumul've
ORG:CORP	→ STREET	5	14664	0.01%	96.96%
SPORTS EVENT	→ SEASON + o	5	27	0.01%	96.97%
GOVERNMENT	→ ORDINAL + NATIONALITY + o	5	837	0.01%	96.97%
PER	→ INI + NAME + NAMEMOD	5	14911	0.01%	96.98%
ORG:EDU	→ STATE	5	330	0.01%	96.98%
NAME	→ o + NAME	5	2600	0.01%	96.99%
PRODUCT:OTHER	→ GOVERNMENT	5	161	0.01%	96.99%
DATE	→ REL + DURATION + o + DATE	5	14977	0.01%	97.00%
DURATION	→ DURATION + o + CARDINAL	5	4081	0.01%	97.00%
ORG:CORP	→ COUNTRY	5	14664	0.01%	97.01%
IPOINTS	→ IPOINTS + o + IPOINTS	5	2221	0.01%	97.01%
SPORTS EVENT	→ DATE + SEASON + o	5	27	0.01%	97.02%
RATE	→ QUAL + RATE	5	2107	0.01%	97.03%
BOOK	→ o + GOD	5	49	0.01%	97.03%
STADIUM	→ CITY + o	5	13	0.01%	97.04%
ORG:OTHER	→ o + CITY	5	316	0.01%	97.04%
DATE	→ CARDINAL + REL + DURATION	5	14977	0.01%	97.05%
ORG:CORP	→ ATTRACTION	5	14664	0.01%	97.05%
DATE	→ DATE + o + YEAR	5	14977	0.01%	97.06%
SPEED	→ QUANTITY:1D + o + DURATION	5	15	0.01%	97.06%
WEIGHT	→ CARDINAL	5	273	0.01%	97.07%
ORG:CORP	→ o + GPE	5	14664	0.01%	97.07%
PER	→ INI + FIRST + NAME	5	14911	0.01%	97.08%
CARDINAL	→ CARDINAL + o + MULT	5	10103	0.01%	97.08%
YEAR	→ YEAR + o + YEAR	5	8	0.01%	97.09%
NAME	→ HON + NAME	5	2600	0.01%	97.10%
ORG:CORP	→ NAME + o + CORP JARGON + o + COUNTRY	5	14664	0.01%	97.10%
ORG:CORP	→ o + COUNTRY + o + CORP JARGON	5	14664	0.01%	97.11%
WOA	→ NAME + o	5	64	0.01%	97.11%
ORG:CORP	→ INI + o	5	14664	0.01%	97.12%
TV SHOW	→ NAME + GOVERNMENT	5	67	0.01%	97.12%
PER	→ FIRST + MIDDLE + NAME + NAMEMOD	5	14911	0.01%	97.13%
DATE	→ REL + o + ORDINAL + DURATION	5	14977	0.01%	97.13%
ORG:CORP	→ o + CARDINAL + CORP JARGON	5	14664	0.01%	97.14%
DATE	→ ORDINAL + DURATION + o + MONTH + NUMDAY	5	14977	0.01%	97.14%
DATE	→ YEAR + o + ORDINAL + DURATION	5	14977	0.01%	97.15%
ORG:CORP	→ REGION + CORP JARGON	5	14664	0.01%	97.15%
PER	→ PER + o + PER	5	14911	0.01%	97.16%
LAW	→ o + CARDINAL + o	5	221	0.01%	97.17%

rule	children	count	of	% total	cumul've
UNIT	→ COUNTRY + UNIT	5	218	0.01%	97.17%
ORG:CORP	→ GRP:PER	5	14664	0.01%	97.18%
EVENT	→ o + DURATION	5	148	0.01%	97.18%
ROLE	→ ROLE + o + COUNTRY	5	629	0.01%	97.19%
MONEY	→ QUAL + MONTH	5	12580	0.01%	97.19%
TV SHOW	→ o + NAME + o	5	67	0.01%	97.20%
MEDIA	→ o + CITY	5	661	0.01%	97.20%
WOA	→ NATIONALITY + o	5	64	0.01%	97.21%
PER	→ FIRST + o + NICKNAME + o + NAME	5	14911	0.01%	97.21%
ORG:RELIGIOUS	→ NAME + o	5	25	0.01%	97.22%
TV SHOW	→ NAME + o	5	67	0.01%	97.23%
ORG:CORP	→ o + REGION + CORP JARGON	5	14664	0.01%	97.23%
INDEX	→ MEDIA + CARDINAL + o	5	535	0.01%	97.24%
DATE	→ ORDINAL + DURATION + o + DURATION	5	14977	0.01%	97.24%
DURATION	→ ORDINAL + CARDINAL + DURATION	4	4081	0.00%	97.25%
NAME	→ FIRST + INI	4	2600	0.00%	97.25%
EVENT	→ o + YEAR	4	148	0.00%	97.25%
BRIDGE	→ REGION + o	4	22	0.00%	97.26%
MEDIA	→ o + COUNTRY	4	661	0.00%	97.26%
GOVERNMENT	→ STATE	4	837	0.00%	97.27%
REGION	→ OCEAN + o	4	185	0.00%	97.27%
NORP:OTHER	→ o + NATIONALITY	4	54	0.00%	97.28%
PERIODIC	→ ORDINAL + o + PERIODIC	4	175	0.00%	97.28%
PERCENT	→ CARDINAL + UNIT + o + CARDINAL + UNIT	4	6510	0.00%	97.28%
ORG:CORP	→ NAME + OCEAN + CORP JARGON	4	14664	0.00%	97.29%
IPOINTS	→ CARDINAL + o	4	2221	0.00%	97.29%
DATE	→ o + DAY	4	14977	0.00%	97.30%
QUANTITY:2D	→ CARDINAL + MULT + UNIT	4	54	0.00%	97.30%
LOCATION:OTHER	→ o + COUNTRY	4	72	0.00%	97.31%
ORG:CORP	→ NAME + o + NAME + o + CORP JARGON + o	4	14664	0.00%	97.31%
ORG:CORP	→ NAME + CONTINENT + CORP JARGON + o	4	14664	0.00%	97.31%
ROLE	→ HON + COUNTRY	4	629	0.00%	97.32%
ORG:CORP	→ NAME + ORG:CORP	4	14664	0.00%	97.32%
REGION	→ STATE + o	4	185	0.00%	97.33%
WOA	→ DAY + DURATION + o + NAME	4	64	0.00%	97.33%
BOOK	→ o + NATIONALITY + o	4	49	0.00%	97.34%
ROLE	→ GPE + ROLE	4	629	0.00%	97.34%
ORG:CORP	→ INI + o + CORP JARGON	4	14664	0.00%	97.34%
DATE	→ o + DATE + o + DATE	4	14977	0.00%	97.35%

rule	children	count	of	% total	cumul've
ORG:CORP	→ o + REGION + o + CORP JARGON	4	14664	0.00%	97.35%
ORG:CORP	→ o + NORP:OTHER + o	4	14664	0.00%	97.36%
DATE	→ SEASON + o	4	14977	0.00%	97.36%
PER	→ INI + NAME + NAME	4	14911	0.00%	97.37%
FUND	→ COUNTRY + o	4	34	0.00%	97.37%
GOVERNMENT	→ o + GOVERNMENT	4	837	0.00%	97.37%
ORG:CORP	→ ORDINAL + STATE	4	14664	0.00%	97.38%
ORG:CORP	→ CONTINENT + o	4	14664	0.00%	97.38%
MEDIA	→ CITY + PERIODIC + o	4	661	0.00%	97.39%
ORG:CORP	→ ORDINAL + o + STATE	4	14664	0.00%	97.39%
PERIODIC	→ DATE + PERIODIC	4	175	0.00%	97.40%
ANIMATE	→ FIRST + NAME	4	14	0.00%	97.40%
GOVERNMENT	→ o + CITY	4	837	0.00%	97.41%
MONEY	→ QUAL + CARDINAL	4	12580	0.00%	97.41%
DURATION	→ DURATION + o + YEAR	4	4081	0.00%	97.41%
INDEX	→ ORG:CORP + o + CARDINAL + o	4	535	0.00%	97.42%
DATE	→ REL + o + DURATION + o + DATE	4	14977	0.00%	97.42%
RATE	→ QUANTITY:OTHER + o + DURATION	4	2107	0.00%	97.43%
DATE	→ REL + ORDINAL + DURATION	4	14977	0.00%	97.43%
HOTEL	→ CITY + o	4	28	0.00%	97.44%
PRODUCT:OTHER	→ STATE + o	4	161	0.00%	97.44%
ORG:CORP	→ CITY + NAME + CORP JARGON	4	14664	0.00%	97.44%
ORG:CORP	→ o + CONTINENT	4	14664	0.00%	97.45%
GOVERNMENT	→ GPE	4	837	0.00%	97.45%
PERIODIC	→ DAY + DURATION	4	175	0.00%	97.46%
PER	→ ROLE + INI + MIDDLE + NAME	4	14911	0.00%	97.46%
PRODUCT:OTHER	→ ORG:CORP	4	161	0.00%	97.47%
ORG:CORP	→ STATE + NATIONALITY	4	14664	0.00%	97.47%
DATE	→ YEAR + o + DATE	4	14977	0.00%	97.47%
BOOK	→ PER	4	49	0.00%	97.48%
ORG:CORP	→ STATE + CORP JARGON	4	14664	0.00%	97.48%
DATE	→ SEASON + DURATION	4	14977	0.00%	97.49%
PER	→ INI + o + NICKNAME + o + NAME	4	14911	0.00%	97.49%
PER	→ PER + ROLE	4	14911	0.00%	97.50%
ORG:OTHER	→ o + NORP:OTHER + o	4	316	0.00%	97.50%
DATE	→ MONTH + DATE	4	14977	0.00%	97.50%
PERIODIC	→ QUAL + PERIODIC	4	175	0.00%	97.51%
COUNTRY	→ NAME + o	4	8	0.00%	97.51%
FIRST	→ CARDINAL + MULT	4	25	0.00%	97.52%

rule	children	count	of	% total	cumul've
TIME	→ DURATION + REL	4	98	0.00%	97.52%
INDEX	→ ORG:CORP + o + CARDINAL	4	535	0.00%	97.53%
MONEY	→ MONEY + o + MONEY + o	4	12580	0.00%	97.53%
ORG:OTHER	→ REGION + o	4	316	0.00%	97.53%
ORG:CORP	→ NAME + CORP JARGON + o + CORP JARGON	4	14664	0.00%	97.54%
ORG:CORP	→ NATIONALITY + o + CORP JARGON + o	4	14664	0.00%	97.54%
EVENT	→ AWARD	4	148	0.00%	97.55%
CARDINAL	→ CARDINAL + UNIT	4	10103	0.00%	97.55%
CARDINAL	→ CARDINAL	4	10103	0.00%	97.56%
LAW	→ GOVERNMENT + o	4	221	0.00%	97.56%
DATE	→ DURATION + YEAR	4	14977	0.00%	97.56%
DATE	→ PER + DURATION	4	14977	0.00%	97.57%
ORG:CORP	→ FIRST	4	14664	0.00%	97.57%
ORG:CORP	→ PRODUCT:FOOD	4	14664	0.00%	97.58%
STREET	→ STATE + o	4	92	0.00%	97.58%
BUILDING	→ ORG:CORP	4	55	0.00%	97.59%
INDEX	→ MEDIA + o + CARDINAL + o	4	535	0.00%	97.59%
VEHICLE	→ ORG:CORP + CARDINAL	4	124	0.00%	97.59%
ORG:CORP	→ FIRST + o	4	14664	0.00%	97.60%
ATTRACTION	→ o + NAME	4	11	0.00%	97.60%
DATE	→ o + DURATION + o + YEAR	4	14977	0.00%	97.61%
ORG:EDU	→ o + CORP JARGON	4	330	0.00%	97.61%
MONEY	→ UNIT + o	4	12580	0.00%	97.62%
ORG:CORP	→ o + CITY + o	4	14664	0.00%	97.62%
CARDINAL	→ QUAL + CARDINAL + MULT	4	10103	0.00%	97.63%
GOVERNMENT	→ REGION + o	4	837	0.00%	97.63%
ORG:CORP	→ STATE + OCEAN	4	14664	0.00%	97.63%
MONEY	→ QUAL + o + MONEY	4	12580	0.00%	97.64%
INDEX	→ CARDINAL + o	4	535	0.00%	97.64%
PER	→ FIRST + INI + o + NICKNAME + o + NAME	4	14911	0.00%	97.65%
PER	→ FIRST + FIRST + NAME	4	14911	0.00%	97.65%
ORG:CORP	→ GPE + o + CORP JARGON + o	4	14664	0.00%	97.66%
UNIT	→ NAME + o	4	218	0.00%	97.66%
DATE	→ REL + DAY + DURATION	4	14977	0.00%	97.66%
PER	→ ROLE + FIRST + o + NICKNAME + o + NAME	4	14911	0.00%	97.67%
ORG:RELIGIOUS	→ RELIGION + o	4	25	0.00%	97.67%
PER	→ ROLE + FIRST + INI + NAME + NAMEMOD	4	14911	0.00%	97.68%
ORG:CORP	→ NATIONALITY + OCEAN + CORP JARGON	4	14664	0.00%	97.68%
MEDIA	→ COUNTRY + PERIODIC	3	661	0.00%	97.68%

rule	children	count	of	% total	cumul've
ORG:CORP	→ OCEAN + COUNTRY	3	14664	0.00%	97.69%
ORG:CORP	→ NATIONALITY + NAME + o + CORP JARGON	3	14664	0.00%	97.69%
MONEY	→ UNIT + CARDINAL + o	3	12580	0.00%	97.69%
DATE	→ o + MONTH	3	14977	0.00%	97.70%
EVENT	→ HOTEL	3	148	0.00%	97.70%
ORG:CORP	→ o + CORP JARGON + o + STATE	3	14664	0.00%	97.70%
MONEY	→ MONEY + o + MONTH	3	12580	0.00%	97.71%
AWARD	→ COUNTRY + o	3	14	0.00%	97.71%
DURATION	→ REL + o + DURATION	3	4081	0.00%	97.71%
ORG:CORP	→ MUSEUM	3	14664	0.00%	97.72%
MONTH	→ ROLE + FIRST + NAME	3	29	0.00%	97.72%
WOA	→ CITY + o	3	64	0.00%	97.72%
ARMY	→ ARMY + o	3	16	0.00%	97.73%
NAME	→ INI + FIRST + NAME	3	2600	0.00%	97.73%
GOVERNMENT	→ o + NATIONALITY	3	837	0.00%	97.73%
ORG:POLITICAL	→ NATIONALITY + NORP:POLITICAL + o	3	74	0.00%	97.74%
ORG:CORP	→ REGION + NAME	3	14664	0.00%	97.74%
ORG:CORP	→ CITY + o + CORP JARGON + o	3	14664	0.00%	97.74%
LAW	→ o + CARDINAL + o + CARDINAL	3	221	0.00%	97.75%
SEASON	→ SEASON + o + SEASON	3	4	0.00%	97.75%
LOCATION:OTHER	→ NAME	3	72	0.00%	97.75%
ORG:CORP	→ NAME + GPE + CORP JARGON	3	14664	0.00%	97.76%
ARMY	→ COUNTRY + o	3	16	0.00%	97.76%
CARDINAL	→ QUAL + QUAL + CARDINAL	3	10103	0.00%	97.76%
ORG:CORP	→ NAME + o + COUNTRY + o	3	14664	0.00%	97.77%
GOVERNMENT	→ NAME + CORP JARGON	3	837	0.00%	97.77%
PER	→ PRODUCT:DRUG + FIRST + NAME	3	14911	0.00%	97.77%
QUANTITY:3D	→ QUAL + QUANTITY:3D	3	143	0.00%	97.78%
ORG:OTHER	→ CITY	3	316	0.00%	97.78%
AGE	→ QUAL + o + AGE	3	438	0.00%	97.78%
ANIMATE	→ FIRST	3	14	0.00%	97.78%
FILM	→ o + PER	3	21	0.00%	97.79%
ORG:CORP	→ o + ORDINAL + o	3	14664	0.00%	97.79%
WOA	→ NAME	3	64	0.00%	97.79%
GRP:PER	→ SUBURB	3	124	0.00%	97.80%
PRODUCT:OTHER	→ COUNTRY + o	3	161	0.00%	97.80%
PERCENT	→ UNIT + CARDINAL	3	6510	0.00%	97.80%
ORG:CORP	→ REGION + o + CORP JARGON + o	3	14664	0.00%	97.81%
MONEY	→ REL + MONEY	3	12580	0.00%	97.81%

rule	children	count	of	% total	cumul've
DURATION	→ MONTH + o + MONTH	3	4081	0.00%	97.81%
DATE	→ TIME	3	14977	0.00%	97.82%
ORG:CORP	→ LOCATION:OTHER + CORP JARGON	3	14664	0.00%	97.82%
DATE	→ YEAR + EVENT	3	14977	0.00%	97.82%
GOVERNMENT	→ ROLE + o	3	837	0.00%	97.83%
MONEY	→ o + MONEY + o + MONEY	3	12580	0.00%	97.83%
PER	→ ROLE + NAME + FIRST + MIDDLE	3	14911	0.00%	97.83%
GOVERNMENT	→ o + GOVERNMENT + o + GOVERNMENT + o + GOVERNMENT	3	837	0.00%	97.84%
STREET	→ NAME + ORDINAL + o	3	92	0.00%	97.84%
CARDINAL	→ CARDINAL + MULT + MULT	3	10103	0.00%	97.84%
VEHICLE	→ DATE + o	3	124	0.00%	97.85%
REGION	→ o + OCEAN	3	185	0.00%	97.85%
TIME	→ REL + DURATION	3	98	0.00%	97.85%
PERCENT	→ FIRST + UNIT	3	6510	0.00%	97.86%
DATE	→ REL + CARDINAL	3	14977	0.00%	97.86%
DATE	→ MONTH + NUMDAY + o + YEAR + o + MONTH + NUMDAY + o + YEAR	3	14977	0.00%	97.86%
CARDINAL	→ QUAL + o + MULT	3	10103	0.00%	97.87%
ROLE	→ NORP:POLITICAL + o + STATE	3	629	0.00%	97.87%
ORG:CORP	→ FIRST + INI + NAME	3	14664	0.00%	97.87%
ORG:CORP	→ NAME + o + COUNTRY + CORP JARGON	3	14664	0.00%	97.88%
EVENT	→ AWARD + o	3	148	0.00%	97.88%
WOA	→ COUNTRY + o	3	64	0.00%	97.88%
CARDINAL	→ CARDINAL + DURATION	3	10103	0.00%	97.89%
ROLE	→ ROLE + ROLE	3	629	0.00%	97.89%
MEDIA	→ ORG:EDU + o	3	661	0.00%	97.89%
DATE	→ o + DURATION + REL + DATE	3	14977	0.00%	97.89%
QUAL	→ o + QUAL	3	6	0.00%	97.90%
PERIODIC	→ DURATION	3	175	0.00%	97.90%
DAY	→ REL + DURATION	3	14	0.00%	97.90%
BOOK	→ o + NAME	3	49	0.00%	97.91%
STREET	→ CARDINAL	3	92	0.00%	97.91%
ORG:OTHER	→ NAME + o + CORP JARGON	3	316	0.00%	97.91%
VEHICLE	→ DATE + ORG:CORP + o	3	124	0.00%	97.92%
DATE	→ MONTH + NUMDAY + DATE	3	14977	0.00%	97.92%
ROLE	→ o + ROLE + o	3	629	0.00%	97.92%
PER	→ NICKNAME + NAME	3	14911	0.00%	97.93%
DATE	→ REL + o + DURATION + DATE	3	14977	0.00%	97.93%

rule	children	count	of	% total	cumul've
LAW	→ o + DATE	3	221	0.00%	97.93%
QUANTITY:1D	→ CARDINAL	3	156	0.00%	97.94%
UNIT	→ NAME + UNIT	3	218	0.00%	97.94%
RATE	→ RATE + o + RATE	3	2107	0.00%	97.94%
DURATION	→ DURATION + o + QUAL	3	4081	0.00%	97.95%
RATE	→ QUAL + MONEY + o	3	2107	0.00%	97.95%
REGION	→ ORDINAL + o	3	185	0.00%	97.95%
ROLE	→ ROLE + FIRST + NAME	3	629	0.00%	97.96%
CARDINAL	→ CARDINAL + o	3	10103	0.00%	97.96%
ORG:EDU	→ GPE	3	330	0.00%	97.96%
TIME	→ REL + DATE	3	98	0.00%	97.97%
STREET	→ o + ORDINAL + o	3	92	0.00%	97.97%
CARDINAL	→ UNIT + CARDINAL	3	10103	0.00%	97.97%
PRODUCT:FOOD	→ ORG:CORP + o	3	5	0.00%	97.98%
NAME	→ ROLE + FIRST + NAME	3	2600	0.00%	97.98%
ORG:CORP	→ CITY + OCEAN + CORP JARGON	3	14664	0.00%	97.98%
CARDINAL	→ CARDINAL + o + QUAL	3	10103	0.00%	97.99%
PERCENT	→ CARDINAL + PERCENT	3	6510	0.00%	97.99%
ORG:CORP	→ CITY + NAME	3	14664	0.00%	97.99%
AGE	→ o + CARDINAL + QUAL	3	438	0.00%	98.00%
GOVERNMENT	→ o + STATE + o	3	837	0.00%	98.00%
PRODUCT:OTHER	→ ORG:CORP + o + CARDINAL	3	161	0.00%	98.00%
MONEY	→ FIRST + UNIT	3	12580	0.00%	98.00%
ORG:CORP	→ NAME + o + CONTINENT	3	14664	0.00%	98.01%
ORG:OTHER	→ o + DISEASE + o	3	316	0.00%	98.01%
ORG:EDU	→ o + REGION	3	330	0.00%	98.01%
QUANTITY:2D	→ UNIT	3	54	0.00%	98.02%
NAME	→ NAME + NAME + NAME + NAME + o + NAME	3	2600	0.00%	98.02%
AGE	→ CARDINAL + o	3	438	0.00%	98.02%
DATE	→ ORDINAL + DURATION + REL + o + DATE	3	14977	0.00%	98.03%
NAME	→ FIRST + MIDDLE + NAME	3	2600	0.00%	98.03%
PERIODIC	→ REL + o + PERIODIC	3	175	0.00%	98.03%
ORG:CORP	→ o + NAME + CORP JARGON + o	3	14664	0.00%	98.04%
SPORTS EVENT	→ o + CARDINAL	3	27	0.00%	98.04%
ORG:CORP	→ GPE + o	3	14664	0.00%	98.04%
ORG:CORP	→ REGION + NAME + CORP JARGON	3	14664	0.00%	98.05%
UNIT	→ WEIGHT	3	218	0.00%	98.05%
DATE	→ ORDINAL + CARDINAL + o + YEAR	3	14977	0.00%	98.05%
DATE	→ DAY + MONTH + NUMDAY + o + YEAR	3	14977	0.00%	98.06%

rule	children	count	of	% total	cumul've
ORG:CORP	→ NATIONALITY + o + CORP JARGON + CORP JAR-	3	14664	0.00%	98.06%
	GON				
DATE	→ REL + PERIODIC	3	14977	0.00%	98.06%
AGE	→ QUAL + CARDINAL + DURATION + o	3	438	0.00%	98.07%
DATE	→ DURATION + REL + EVENT	3	14977	0.00%	98.07%
ORG:CORP	→ NAME + NAME + NAME + CORP JARGON	3	14664	0.00%	98.07%
FIRST	→ QUAL + CARDINAL	3	25	0.00%	98.08%
ORG:CORP	→ ORG:CORP + COUNTRY	3	14664	0.00%	98.08%
FILM	→ o + CARDINAL	3	21	0.00%	98.08%
REGION	→ NORP:OTHER + o	3	185	0.00%	98.09%
FILM	→ DURATION + o	3	21	0.00%	98.09%
RATE	→ RATE + QUAL	3	2107	0.00%	98.09%
REL	→ REL + o + REL	3	4	0.00%	98.10%
PRODUCT:OTHER	→ CARDINAL + o	3	161	0.00%	98.10%
PER	→ ROLE + INI + NAME	3	14911	0.00%	98.10%
FACILITY	→ GPE	3	67	0.00%	98.11%
ELECTRONICS	→ NAME	3	58	0.00%	98.11%
PER	→ ROLE + FIRST + NAME + NAMEMOD	3	14911	0.00%	98.11%
DATE	→ o + YEAR + o + YEAR	3	14977	0.00%	98.11%
DATE	→ DATE + DATE	3	14977	0.00%	98.12%
MEDIA	→ ORG:CORP + o	3	661	0.00%	98.12%
ELECTRONICS	→ o + CARDINAL	3	58	0.00%	98.12%
QUANTITY:3D	→ CARDINAL + o + UNIT	3	143	0.00%	98.13%
PERCENT	→ QUAL + o + CARDINAL + UNIT	3	6510	0.00%	98.13%
REGION	→ o + CITY	3	185	0.00%	98.13%
ORG:CORP	→ o + UNIT	3	14664	0.00%	98.14%
ORG:CORP	→ GRP:PER + CORP JARGON	3	14664	0.00%	98.14%
RIVER	→ FIRST + o	3	21	0.00%	98.14%
EVENT	→ MONTH + YEAR + o	3	148	0.00%	98.15%
WOA	→ o + NATIONALITY + o	3	64	0.00%	98.15%
ROLE	→ ROLE + ORG:OTHER	3	629	0.00%	98.15%
DURATION	→ CARDINAL + o	3	4081	0.00%	98.16%
RATE	→ MONEY + o + ORG:CORP + o	3	2107	0.00%	98.16%
PRODUCT:OTHER	→ o + ORDINAL + ORG:CORP	3	161	0.00%	98.16%
TV SHOW	→ CITY + o	3	67	0.00%	98.17%
ORG:CORP	→ o + STATE + CORP JARGON	3	14664	0.00%	98.17%
PRODUCT:OTHER	→ GOVERNMENT + o	3	161	0.00%	98.17%
DATE	→ MONTH + NUMDAY + o + CARDINAL	3	14977	0.00%	98.18%
ORG:CORP	→ CITY + CORP JARGON + o	3	14664	0.00%	98.18%

rule	children	count	of	% total	cumul've
ORG:CORP	→ FIRST + o + CORP JARGON	3	14664	0.00%	98.18%
MEDIA	→ NAME + o + CORP JARGON	3	661	0.00%	98.19%
TIME	→ TIME + o	3	98	0.00%	98.19%
LOCATION:OTHER	→ NATIONALITY + o	3	72	0.00%	98.19%
PER	→ FIRST + MIDDLE + LANGUAGE	3	14911	0.00%	98.20%
ORG:CORP	→ BUILDING	3	14664	0.00%	98.20%
DATE	→ REL + EVENT	2	14977	0.00%	98.20%
DATE	→ REL + CARDINAL + EVENT	2	14977	0.00%	98.20%
HOTEL	→ o + CORP JARGON	2	28	0.00%	98.21%
ORG:OTHER	→ GRP:LOC + o	2	316	0.00%	98.21%
MEDIA	→ STATE + o	2	661	0.00%	98.21%
ORG:POLITICAL	→ o + NATIONALITY	2	74	0.00%	98.21%
LAW	→ NATIONALITY + o + YEAR	2	221	0.00%	98.21%
PRODUCT:OTHER	→ CARDINAL	2	161	0.00%	98.22%
MONEY	→ UNIT + CARDINAL + o + UNIT + CARDINAL	2	12580	0.00%	98.22%
DATE	→ DURATION + o + DURATION	2	14977	0.00%	98.22%
PRODUCT:OTHER	→ STATE	2	161	0.00%	98.22%
ORG:CORP	→ NAME + CONTINENT + CORP JARGON	2	14664	0.00%	98.22%
MEDIA	→ GPE + o	2	661	0.00%	98.23%
DATE	→ MONTH + NUMDAY + o + MONTH + NUMDAY + o + YEAR	2	14977	0.00%	98.23%
REGION	→ RIVER + o	2	185	0.00%	98.23%
DATE	→ REL + o	2	14977	0.00%	98.23%
TIME	→ CARDINAL + o + DURATION	2	98	0.00%	98.24%
FACILITY	→ NAME + ORG:EDU + o	2	67	0.00%	98.24%
PER	→ FIRST + o + NAME + o	2	14911	0.00%	98.24%
DATE	→ TIME + o + DATE	2	14977	0.00%	98.24%
MONEY	→ MONEY + o + MONEY + o + MONEY	2	12580	0.00%	98.24%
ORG:CORP	→ o + CITY + o + CORP JARGON	2	14664	0.00%	98.25%
PER	→ GRP:ORG + PER	2	14911	0.00%	98.25%
DATE	→ QUAL + o + DURATION + REL	2	14977	0.00%	98.25%
PRODUCT:OTHER	→ LOCATION:OTHER + LOCATION:OTHER	2	161	0.00%	98.25%
INDEX	→ COUNTRY + o	2	535	0.00%	98.25%
MONEY	→ UNIT + MONEY	2	12580	0.00%	98.26%
RATE	→ QUANTITY:1D + o + DURATION	2	2107	0.00%	98.26%
LOCATION:OTHER	→ o + NAME	2	72	0.00%	98.26%
DURATION	→ SEASON + o + YEAR	2	4081	0.00%	98.26%
MONEY	→ CARDINAL + o	2	12580	0.00%	98.27%
ORG:OTHER	→ o + CITY + o	2	316	0.00%	98.27%

rule	children	count	of	% total	cumul've
DATE	→ NUMDAY	2	14977	0.00%	98.27%
DURATION	→ DAY + DURATION	2	4081	0.00%	98.27%
DATE	→ SEASON + o + DATE	2	14977	0.00%	98.27%
ORG:CORP	→ LOCATION:OTHER + o + CORP JARGON + o	2	14664	0.00%	98.28%
ORG:CORP	→ BOOK	2	14664	0.00%	98.28%
GPE	→ LOCATION:OTHER	2	12	0.00%	98.28%
ORG:CORP	→ GRP:ORG + o	2	14664	0.00%	98.28%
GPE	→ NORP:OTHER + o	2	12	0.00%	98.29%
MEDIA	→ FIRST + o	2	661	0.00%	98.29%
ORG:CORP	→ SPORTS EVENT	2	14664	0.00%	98.29%
ORG:CORP	→ GOD + CORP JARGON	2	14664	0.00%	98.29%
GPE	→ NAME + o	2	12	0.00%	98.29%
DATE	→ MONTH + o + MONTH	2	14977	0.00%	98.30%
DATE	→ o + DATE + o + DATE + o + YEAR	2	14977	0.00%	98.30%
DATE	→ QUAL + CARDINAL + DURATION	2	14977	0.00%	98.30%
DATE	→ DAY + o + ORDINAL	2	14977	0.00%	98.30%
PER	→ ROLE + o + PER	2	14911	0.00%	98.30%
EVENT	→ STREET	2	148	0.00%	98.31%
PER	→ ROLE + HON + NAME	2	14911	0.00%	98.31%
DURATION	→ REL + CARDINAL	2	4081	0.00%	98.31%
HON	→ HON + o + HON	2	3	0.00%	98.31%
MONEY	→ QUAL + CARDINAL + UNIT	2	12580	0.00%	98.32%
PERIODIC	→ DURATION + o	2	175	0.00%	98.32%
RIVER	→ STATE + o	2	21	0.00%	98.32%
DURATION	→ CARDINAL + DURATION + REL	2	4081	0.00%	98.32%
PER	→ FIRST + NAME + NAME	2	14911	0.00%	98.32%
DATE	→ MONTH + NUMDAY + o + DATE	2	14977	0.00%	98.33%
IPOINTS	→ QUAL + o + IPOINTS	2	2221	0.00%	98.33%
TIME	→ QUAL + DURATION	2	98	0.00%	98.33%
GRP:ORG	→ ORG:CORP + CORP JARGON	2	401	0.00%	98.33%
DAY	→ ORDINAL + DURATION + o + DATE	2	14	0.00%	98.33%
TV SHOW	→ DATE	2	67	0.00%	98.34%
LAW	→ PER + o + GOVERNMENT	2	221	0.00%	98.34%
ORG:CORP	→ NAME + o + CONTINENT + CORP JARGON	2	14664	0.00%	98.34%
DATE:OTHER	→ REL + o	2	46	0.00%	98.34%
ROLE	→ HON + ROLE	2	629	0.00%	98.35%
QUANTITY:1D	→ CARDINAL + QUANTITY:1D	2	156	0.00%	98.35%
LAW	→ NAME + o + NAME	2	221	0.00%	98.35%
MEDIA	→ o + NATIONALITY + o	2	661	0.00%	98.35%

rule	children	count	of	% total	cumul've
BOOK	→ NATIONALITY + o	2	49	0.00%	98.35%
RATE	→ UNIT + CARDINAL + o	2	2107	0.00%	98.36%
ORG:EDU	→ GPE + o	2	330	0.00%	98.36%
ROLE	→ COUNTRY + o + ROLE	2	629	0.00%	98.36%
DATE	→ CARDINAL + DURATION + DATE	2	14977	0.00%	98.36%
DATE	→ QUAL + MONTH	2	14977	0.00%	98.37%
ORG:CORP	→ NAME + CITY + CORP JARGON	2	14664	0.00%	98.37%
DATE	→ REL + DATE + DURATION	2	14977	0.00%	98.37%
ORG:CORP	→ NAME + o + NAME + o + NAME + CORP JARGON	2	14664	0.00%	98.37%
LANGUAGE	→ CARDINAL	2	3	0.00%	98.37%
RATE	→ UNIT + CARDINAL + RATE	2	2107	0.00%	98.38%
DATE	→ DATE + o + MONTH + NUMDAY	2	14977	0.00%	98.38%
STADIUM	→ SPORTS TEAM + o	2	13	0.00%	98.38%
ORG:CORP	→ NATIONALITY + NAME + CORP JARGON	2	14664	0.00%	98.38%
HOTEL	→ ORG:CORP + o	2	28	0.00%	98.38%
DATE	→ REL + o + DAY	2	14977	0.00%	98.39%
NAME	→ NAME + o + NAME + NAME	2	2600	0.00%	98.39%
MONTH	→ ROLE + NAME	2	29	0.00%	98.39%
PERCENT	→ QUAL + o + PERCENT	2	6510	0.00%	98.39%
ORG:CORP	→ o + NAME + o + CORP JARGON + o	2	14664	0.00%	98.40%
MUSEUM	→ ORG:EDU + o	2	12	0.00%	98.40%
ORG:CORP	→ OCEAN + ORDINAL + o + CORP JARGON	2	14664	0.00%	98.40%
INDEX	→ o + CARDINAL	2	535	0.00%	98.40%
ORG:CORP	→ RIVER + CORP JARGON	2	14664	0.00%	98.40%
ORG:POLITICAL	→ RELIGION + NORP:POLITICAL + o	2	74	0.00%	98.41%
DATE	→ DATE + o	2	14977	0.00%	98.41%
DATE	→ DATE + REL	2	14977	0.00%	98.41%
VEHICLE	→ DATE + VEHICLE	2	124	0.00%	98.41%
ROLE	→ ORG:EDU + ROLE	2	629	0.00%	98.41%
ORG:CORP	→ ORDINAL + CITY + o	2	14664	0.00%	98.42%
DURATION	→ CARDINAL + DURATION + o	2	4081	0.00%	98.42%
DURATION	→ ORDINAL + DURATION + o	2	4081	0.00%	98.42%
RATE	→ UNIT + RATE	2	2107	0.00%	98.42%
REGION	→ NAME	2	185	0.00%	98.43%
ORG:CORP	→ CITY + o + CITY + o + CORP JARGON	2	14664	0.00%	98.43%
ORG:POLITICAL	→ o + NORP:OTHER + o	2	74	0.00%	98.43%
SPORTS EVENT	→ SEASON + o + DATE	2	27	0.00%	98.43%
ARMY	→ o + NATIONALITY	2	16	0.00%	98.43%
NAME	→ NICKNAME	2	2600	0.00%	98.44%

rule	children	count	of	% total	cumul've
ADDRESS NON	→ CARDINAL + STREET	2	2	0.00%	98.44%
RATE	→ MONEY + o + QUANTITY:2D	2	2107	0.00%	98.44%
RATE	→ PERCENT + o	2	2107	0.00%	98.44%
ORG:CORP	→ NAME + REGION	2	14664	0.00%	98.44%
RATE	→ o + DURATION	2	2107	0.00%	98.45%
DATE	→ YEAR + o + ORDINAL + CARDINAL + DURATION	2	14977	0.00%	98.45%
TIME	→ TIME + o + TIME	2	98	0.00%	98.45%
SPORTS EVENT	→ YEAR + SEASON + o	2	27	0.00%	98.45%
TV SHOW	→ CARDINAL + o	2	67	0.00%	98.46%
MONTH	→ CARDINAL + MULT + UNIT	2	29	0.00%	98.46%
PRODUCT:OTHER	→ NAME + LOCATION:OTHER	2	161	0.00%	98.46%
PERCENT	→ PERCENT + o + QUAL	2	6510	0.00%	98.46%
BOOK	→ o + CITY + o	2	49	0.00%	98.46%
STATE	→ REL + DURATION	2	4	0.00%	98.47%
ORG:CORP	→ NAME + STATE + o + CORP JARGON	2	14664	0.00%	98.47%
DATE	→ DAY + MONTH + NUMDAY	2	14977	0.00%	98.47%
ORG:CORP	→ CORP JARGON + NAME	2	14664	0.00%	98.47%
RATE	→ IPOINTS + o + DURATION	2	2107	0.00%	98.48%
MUSEUM	→ NAME + o	2	12	0.00%	98.48%
ORG:CORP	→ NAME + o + REGION + o + CORP JARGON	2	14664	0.00%	98.48%
DATE	→ MONTH + o + REL + DURATION	2	14977	0.00%	98.48%
CARDINAL	→ REL + CARDINAL	2	10103	0.00%	98.48%
FACILITY	→ NAME	2	67	0.00%	98.49%
MEDIA	→ REGION + o	2	661	0.00%	98.49%
OCEAN	→ o + COUNTRY	2	4	0.00%	98.49%
PRODUCT:OTHER	→ ORG:CORP + CARDINAL	2	161	0.00%	98.49%
ORG:CORP	→ ORG:CORP + o + CORP JARGON + o	2	14664	0.00%	98.49%
TV SHOW	→ ANIMATE	2	67	0.00%	98.50%
FILM	→ NAME	2	21	0.00%	98.50%
CARDINAL	→ CAPITAL + MULT	2	10103	0.00%	98.50%
ORG:CORP	→ NAME + o + NAME + o	2	14664	0.00%	98.50%
ORG:CORP	→ o + OCEAN + CORP JARGON + o	2	14664	0.00%	98.51%
INDEX	→ ORDINAL + o	2	535	0.00%	98.51%
ORG:OTHER	→ o + OCEAN + o	2	316	0.00%	98.51%
BOOK	→ NAME + o	2	49	0.00%	98.51%
WOA	→ o + CARDINAL	2	64	0.00%	98.51%
ORG:CORP	→ ORG:EDU + o	2	14664	0.00%	98.52%
DATE	→ REL + DURATION + o + YEAR	2	14977	0.00%	98.52%
DATE	→ PERCENT + o + DURATION	2	14977	0.00%	98.52%

rule	children	count	of	% total	cumul've
UNIT	→ NORP:OTHER + UNIT	2	218	0.00%	98.52%
PER	→ HON + INI	2	14911	0.00%	98.52%
DATE	→ DAY + REL + EVENT	2	14977	0.00%	98.53%
GPE	→ CITY + o	2	12	0.00%	98.53%
ORG:CORP	→ NAME + NAME + o + CORP JARGON	2	14664	0.00%	98.53%
ORG:CORP	→ NAME + o + COUNTRY + CORP JARGON + o	2	14664	0.00%	98.53%
FACILITY	→ STATE + o	2	67	0.00%	98.54%
ATTRACTION	→ RIVER	2	11	0.00%	98.54%
GRP:LOC	→ NORP:OTHER + o	2	18	0.00%	98.54%
PERIODIC	→ o + DURATION + o + DURATION	2	175	0.00%	98.54%
CARDINAL	→ QUAL + o + ORDINAL	2	10103	0.00%	98.54%
ORG:CORP	→ o + COUNTRY + o	2	14664	0.00%	98.55%
ORG:CORP	→ FIRST + INI + NAME + CORP JARGON	2	14664	0.00%	98.55%
AGE	→ QUAL + CARDINAL	2	438	0.00%	98.55%
PERIODIC	→ EVENT	2	175	0.00%	98.55%
MONEY	→ UNIT + CARDINAL + UNIT	2	12580	0.00%	98.55%
AWARD	→ NAME	2	14	0.00%	98.56%
DURATION	→ CITY + o	2	4081	0.00%	98.56%
ORG:CORP	→ OCEAN + NAME + CORP JARGON	2	14664	0.00%	98.56%
ORG:CORP	→ o + CORP JARGON + o + CITY	2	14664	0.00%	98.56%
ORG:CORP	→ o + ORDINAL	2	14664	0.00%	98.57%
BUILDING	→ o + CITY	2	55	0.00%	98.57%
GOVERNMENT	→ LOCATION:OTHER + o	2	837	0.00%	98.57%
ROLE	→ ORG:CORP + o + ROLE	2	629	0.00%	98.57%
PRODUCT:OTHER	→ DURATION + o	2	161	0.00%	98.57%
DATE	→ o + REL + DATE	2	14977	0.00%	98.58%
PRODUCT:OTHER	→ o + UNIT + o	2	161	0.00%	98.58%
ORG:CORP	→ o + CONTINENT + o + CORP JARGON + o	2	14664	0.00%	98.58%
BOOK	→ o + PER	2	49	0.00%	98.58%
TV SHOW	→ CITY	2	67	0.00%	98.59%
DATE	→ ORDINAL + DURATION + o + MONTH	2	14977	0.00%	98.59%
ROLE	→ ROLE + o + CITY	2	629	0.00%	98.59%
WOA	→ o + NAME	2	64	0.00%	98.59%
CARDINAL	→ QUAL + NAME	2	10103	0.00%	98.59%
BOOK	→ o + GRP:PER	2	49	0.00%	98.60%
ORG:CORP	→ NAME + o + CONTINENT + CORP JARGON + o	2	14664	0.00%	98.60%
DATE	→ CARDINAL + o	2	14977	0.00%	98.60%
ORG:CORP	→ NAME + o + NAME + CORP JARGON + o	2	14664	0.00%	98.60%
PRODUCT:OTHER	→ REGION	2	161	0.00%	98.60%

rule	children	count	of	% total	cumul've
ORG:CORP	→ NAME + NAME + CORP JARGON	2	14664	0.00%	98.61%
DAY	→ DAY + o + DAY	2	14	0.00%	98.61%
HOSPITAL	→ CITY + o	2	22	0.00%	98.61%
PER	→ HON + o + NAME	2	14911	0.00%	98.61%
SPEED	→ CARDINAL + SPEED	2	15	0.00%	98.62%
SONG	→ o + CARDINAL + o	2	9	0.00%	98.62%
EVENT	→ DAY + o	2	148	0.00%	98.62%
AWARD	→ WOA + o	2	14	0.00%	98.62%
ORG:CORP	→ o + REGION + o	2	14664	0.00%	98.62%
RATE	→ CARDINAL + o + CARDINAL + o + DURATION	2	2107	0.00%	98.63%
STREET	→ NAME + o + ORDINAL + o	2	92	0.00%	98.63%
MUSEUM	→ NAME	2	12	0.00%	98.63%
BUILDING	→ GPE + o	2	55	0.00%	98.63%
EVENT	→ ORG:OTHER + o	2	148	0.00%	98.63%
GOVERNMENT	→ CITY + o + CORP JARGON	2	837	0.00%	98.64%
ORG:CORP	→ OCEAN + ORDINAL	2	14664	0.00%	98.64%
DURATION	→ ORDINAL	2	4081	0.00%	98.64%
DURATION	→ STATE + o	2	4081	0.00%	98.64%
PER	→ FIRST + MIDDLE	2	14911	0.00%	98.65%
ENERGY	→ CARDINAL + o + UNIT	2	13	0.00%	98.65%
MEDIA	→ PERIODIC + o	2	661	0.00%	98.65%
TV SHOW	→ STREET	2	67	0.00%	98.65%
RATE	→ MONEY + PERIODIC	2	2107	0.00%	98.65%
TV SHOW	→ DATE + GAME	2	67	0.00%	98.66%
MUSEUM	→ CITY + o	2	12	0.00%	98.66%
ATTRACTION	→ CITY	2	11	0.00%	98.66%
ORG:CORP	→ NATIONALITY + o + CITY	2	14664	0.00%	98.66%
GOVERNMENT	→ GPE + o	2	837	0.00%	98.66%
LOCATION:OTHER	→ GPE + o	2	72	0.00%	98.67%
ORG:EDU	→ o + STATE + o + CITY	2	330	0.00%	98.67%
BOOK	→ NAME	2	49	0.00%	98.67%
DURATION	→ ORDINAL + CARDINAL	2	4081	0.00%	98.67%
ORG:POLITICAL	→ NATIONALITY + o	2	74	0.00%	98.68%
DURATION	→ CARDINAL + REL + DURATION	2	4081	0.00%	98.68%
GOVERNMENT	→ REGION	2	837	0.00%	98.68%
LAW	→ PER	2	221	0.00%	98.68%
DURATION	→ DATE + o + DATE	2	4081	0.00%	98.68%
ROLE	→ o + NATIONALITY + o	2	629	0.00%	98.69%
ORG:CORP	→ o + NATIONALITY + o + CORP JARGON	2	14664	0.00%	98.69%

rule	children	count	of	% total	cumul've
DATE	→ REL + o + REL + DURATION	2	14977	0.00%	98.69%
NAME	→ INI + o + INI + NAME	2	2600	0.00%	98.69%
INDEX	→ ORG:OTHER + o	2	535	0.00%	98.70%
TV SHOW	→ PER	2	67	0.00%	98.70%
REGION	→ NATIONALITY + o	2	185	0.00%	98.70%
SPEED	→ UNIT	2	15	0.00%	98.70%
LOCATION:OTHER	→ STATE + o	2	72	0.00%	98.70%
INDEX	→ MONTH + o	2	535	0.00%	98.71%
CARDINAL	→ MULT + o + CARDINAL	2	10103	0.00%	98.71%
MONEY	→ QUAL + MONEY + o + MONTH	2	12580	0.00%	98.71%
MONEY	→ CARDINAL + o + CARDINAL + UNIT	2	12580	0.00%	98.71%
ORG:CORP	→ STADIUM + o	2	14664	0.00%	98.71%
ORG:CORP	→ CARDINAL + o + CORP JARGON	2	14664	0.00%	98.72%
NAME	→ ROLE + FIRST	2	2600	0.00%	98.72%
NORP:OTHER	→ OCEAN + o	2	54	0.00%	98.72%
ORG:CORP	→ VEHICLE	2	14664	0.00%	98.72%
DAY	→ ORDINAL + DURATION	2	14	0.00%	98.73%
ORG:CORP	→ o + NATIONALITY + CORP JARGON	2	14664	0.00%	98.73%
ORG:CORP	→ NAME + GPE	2	14664	0.00%	98.73%
NAME	→ ROLE + NAME	2	2600	0.00%	98.73%
DATE	→ EVENT + DURATION	2	14977	0.00%	98.73%
DATE	→ MONTH + o	2	14977	0.00%	98.74%
DATE	→ DURATION + o + REL + DAY	2	14977	0.00%	98.74%
HOTEL	→ o + CITY	2	28	0.00%	98.74%
ORG:CORP	→ STATE + NAME	2	14664	0.00%	98.74%
QUANTITY:OTHER	→ CARDINAL	2	30	0.00%	98.74%
DATE	→ WAR	2	14977	0.00%	98.75%
DATE	→ DAY + o	2	14977	0.00%	98.75%
DURATION	→ PERIODIC + o + MONTH + NUMDAY	2	4081	0.00%	98.75%
ORG:CORP	→ o + OCEAN + o + CORP JARGON	2	14664	0.00%	98.75%
STADIUM	→ STATE + o	2	13	0.00%	98.76%
ORG:CORP	→ NAME + o + CORP JARGON + o + CORP JARGON	2	14664	0.00%	98.76%
ORG:CORP	→ GPE	2	14664	0.00%	98.76%
DATE	→ ORDINAL + DURATION + REL + DATE	2	14977	0.00%	98.76%
ORG:CORP	→ INI + NAME + o + CORP JARGON	2	14664	0.00%	98.76%
PRODUCT:OTHER	→ NORP:OTHER + o	2	161	0.00%	98.77%
DURATION	→ NUMDAY + DURATION	2	4081	0.00%	98.77%
BOOK	→ o + DURATION	2	49	0.00%	98.77%
ORG:CORP	→ ORDINAL + STATE + o	2	14664	0.00%	98.77%

rule	children	count	of	% total	cumul've
ORG:CORP	→ o + DURATION	2	14664	0.00%	98.77%
QUANTITY:1D	→ QUANTITY:1D + o + QUANTITY:1D	2	156	0.00%	98.78%
BRIDGE	→ NAME + o	2	22	0.00%	98.78%
QUANTITY:3D	→ MULT + UNIT	2	143	0.00%	98.78%
WOA	→ o + ORG:CORP	2	64	0.00%	98.78%
AGE	→ DURATION	2	438	0.00%	98.79%
DURATION	→ CARDINAL + SPORTS SEASON	2	4081	0.00%	98.79%
DATE	→ ORDINAL + CARDINAL + DURATION + o + DURATION	2	14977	0.00%	98.79%
GOVERNMENT	→ o + STATE	2	837	0.00%	98.79%
DATE	→ o + DURATION + DATE	2	14977	0.00%	98.79%
INDEX FUND	→ ORG:CORP + o	2	2	0.00%	98.80%
ORG:EDU	→ NATIONALITY + o	2	330	0.00%	98.80%
ORG:CORP	→ NAME + o + NAME + o + NAME + o + CORP JARGON	2	14664	0.00%	98.80%
FUND	→ o + COUNTRY + o	2	34	0.00%	98.80%
DATE	→ o + DURATION + REL	2	14977	0.00%	98.81%
ORG:EDU	→ ORG:CORP + o + CITY	2	330	0.00%	98.81%
DATE	→ ORDINAL + CARDINAL + o + DATE	2	14977	0.00%	98.81%
LAW	→ CARDINAL + o	2	221	0.00%	98.81%
MEDIA	→ o + NORP:OTHER + GRP:ORG + o	2	661	0.00%	98.81%
QUANTITY:1D	→ CARDINAL + o	2	156	0.00%	98.82%
LAW	→ o + YEAR	2	221	0.00%	98.82%
PERIODIC	→ CARDINAL + DURATION + o + DURATION	2	175	0.00%	98.82%
DURATION	→ QUAL + CARDINAL + o	1	4081	0.00%	98.82%
SPORTS TEAM	→ REGION + o	1	68	0.00%	98.82%
EVENT	→ BUILDING	1	148	0.00%	98.82%
ORG:EDU	→ ORG:CORP + o	1	330	0.00%	98.82%
COUNTRY	→ o + GPE + o + COUNTRY	1	8	0.00%	98.83%
ORG:OTHER	→ NAME + CORP JARGON	1	316	0.00%	98.83%
ROLE	→ COUNTRY + o	1	629	0.00%	98.83%
WOA	→ DAY + o	1	64	0.00%	98.83%
HOTEL	→ CARDINAL + o	1	28	0.00%	98.83%
AGE	→ QUAL + o + LANGUAGE + o + LANGUAGE	1	438	0.00%	98.83%
PERIODIC	→ ORDINAL + DURATION	1	175	0.00%	98.83%
MONEY	→ QUAL + MONEY + UNIT	1	12580	0.00%	98.83%
BOOK	→ o + REGION + o	1	49	0.00%	98.83%
DATE	→ MONEY + o + WEIGHT	1	14977	0.00%	98.84%

rule	children	count	of	% total	cumul've
DATE	→ REL + o + DURATION + o + MONTH + NUMDAY	1	14977	0.00%	98.84%
	+ o + YEAR				
ORG:CORP	→ RIVER + o + RIVER + o	1	14664	0.00%	98.84%
DATE	→ DURATION + o + WAR	1	14977	0.00%	98.84%
ELECTRONICS	→ ELECTRONICS + o + ELECTRONICS	1	58	0.00%	98.84%
DATE	→ DAY + NUMDAY	1	14977	0.00%	98.84%
NAME	→ HURRICANE + o + NAME	1	2600	0.00%	98.84%
ORG:CORP	→ ORG:CORP + o + CITY + o + STATE	1	14664	0.00%	98.84%
ORG:CORP	→ o + NAME + NAME + CORP JARGON	1	14664	0.00%	98.84%
ORG:CORP	→ NAME + STATE + CORP JARGON	1	14664	0.00%	98.84%
GRP:PER	→ GOVERNMENT + NORP:POLITICAL	1	124	0.00%	98.85%
ORG:CORP	→ o + GRP:LOC + o + CORP JARGON	1	14664	0.00%	98.85%
FACILITY	→ ORG:EDU + o	1	67	0.00%	98.85%
PERCENT	→ PERCENT + o + PER	1	6510	0.00%	98.85%
MONEY	→ QUAL + o + UNIT + CARDINAL	1	12580	0.00%	98.85%
CARDINAL	→ MULT + QUAL	1	10103	0.00%	98.85%
QUANTITY:3D	→ QUANTITY:3D + QUAL	1	143	0.00%	98.85%
ORG:CORP	→ ORDINAL + CITY + o + COUNTRY + o + CORP	1	14664	0.00%	98.85%
	JARGON				
ORG:OTHER	→ o + STATE	1	316	0.00%	98.85%
DATE:OTHER	→ CARDINAL + DURATION	1	46	0.00%	98.86%
EVENT	→ o + CITY	1	148	0.00%	98.86%
DATE	→ DATE + o + MONTH	1	14977	0.00%	98.86%
SPORTS SEASON	→ DATE + o	1	3	0.00%	98.86%
ANIMATE	→ NAME + o + RIVER	1	14	0.00%	98.86%
AGE	→ QUAL + o + AGE + o + AGE	1	438	0.00%	98.86%
TEMPERATURE	→ o + CARDINAL + UNIT	1	2	0.00%	98.86%
STREET	→ CITY + o	1	92	0.00%	98.86%
WOA	→ NAME + o + NATIONALITY + o + NATIONALITY	1	64	0.00%	98.86%
	+ o				
GOVERNMENT	→ o + NORP:OTHER + o	1	837	0.00%	98.87%
PERIODIC	→ DAY + o + TIME	1	175	0.00%	98.87%
PRODUCT:OTHER	→ NORP:OTHER	1	161	0.00%	98.87%
GOVERNMENT	→ GPE + o + CARDINAL	1	837	0.00%	98.87%
DATE	→ YEAR + ORDINAL + CARDINAL	1	14977	0.00%	98.87%
MONEY	→ QUAL + o	1	12580	0.00%	98.87%
DATE	→ CARDINAL + DURATION + o + YEAR	1	14977	0.00%	98.87%
ORG:OTHER	→ CARDINAL + o + CARDINAL	1	316	0.00%	98.87%

rule	children	count	of	% total	cumul've
ORG:OTHER	→ STATE	1	316	0.00%	98.87%
ORG:CORP	→ BUILDING + o	1	14664	0.00%	98.88%
ORG:CORP	→ FIRST + NAME + o + REGION + o + CORP JARGON	1	14664	0.00%	98.88%
CITY	→ CITY + o + CITY	1	3	0.00%	98.88%
PRODUCT:OTHER	→ o + NAME	1	161	0.00%	98.88%
PER	→ CARDINAL + UNIT + QUAL	1	14911	0.00%	98.88%
FUND	→ NAME + o + UNIT + o	1	34	0.00%	98.88%
DATE	→ CITY	1	14977	0.00%	98.88%
ORG:RELIGIOUS	→ ORG:RELIGIOUS + o	1	25	0.00%	98.88%
DATE	→ REL + NUMDAY + DURATION	1	14977	0.00%	98.88%
ORG:CORP	→ ORDINAL + NAME + o	1	14664	0.00%	98.88%
ORG:EDU	→ o + GPE + o	1	330	0.00%	98.89%
DATE	→ MONTH + CARDINAL + o + CARDINAL	1	14977	0.00%	98.89%
DURATION	→ CARDINAL + DURATION + o + CARDINAL + DURATION	1	4081	0.00%	98.89%
DATE	→ ORDINAL + ORDINAL + DURATION	1	14977	0.00%	98.89%
DATE	→ EVENT + YEAR	1	14977	0.00%	98.89%
MONTH	→ CARDINAL	1	29	0.00%	98.89%
ORG:EDU	→ o + RELIGION + o	1	330	0.00%	98.89%
MEDIA	→ LOCATION:OTHER + o	1	661	0.00%	98.89%
ORG:CORP	→ NATIONALITY + NAME	1	14664	0.00%	98.89%
POINTS	→ CARDINAL + o	1	24	0.00%	98.90%
DATE	→ REL + o + REL + o + YEAR	1	14977	0.00%	98.90%
CARDINAL	→ o + MULT	1	10103	0.00%	98.90%
ORG:CORP	→ STATE + NATIONALITY + o + CORP JARGON + o	1	14664	0.00%	98.90%
FILM	→ o + ORDINAL + o + GOD	1	21	0.00%	98.90%
ORG:EDU	→ NAME + CORP JARGON	1	330	0.00%	98.90%
GRP:LOC	→ NAME + o	1	18	0.00%	98.90%
FOLD	→ CARDINAL + MULT	1	146	0.00%	98.90%
ORG:CORP	→ ORDINAL + GPE + CORP JARGON	1	14664	0.00%	98.90%
FACILITY	→ COUNTRY + o	1	67	0.00%	98.91%
ORG:OTHER	→ o + CONTINENT	1	316	0.00%	98.91%
ORG:CORP	→ NAME + OCEAN + o + CORP JARGON	1	14664	0.00%	98.91%
DURATION	→ o + GPE	1	4081	0.00%	98.91%
WOA	→ FIRST + o + NATIONALITY + o	1	64	0.00%	98.91%
DATE	→ DURATION + DURATION + DATE	1	14977	0.00%	98.91%
DATE	→ DAY + o + DATE	1	14977	0.00%	98.91%
MEDIA	→ o + CITY + o	1	661	0.00%	98.91%
PRODUCT:OTHER	→ o + CONTINENT	1	161	0.00%	98.91%

rule	children	count	of	% total	cumul've
ROLE	→ ORG:POLITICAL + o + ROLE	1	629	0.00%	98.92%
QUANTITY:1D	→ QUAL + CARDINAL + UNIT	1	156	0.00%	98.92%
ORG:CORP	→ NAME + o + CORP JARGON + o + STATE	1	14664	0.00%	98.92%
ORG:RELIGIOUS	→ RELIGION + o + COUNTRY	1	25	0.00%	98.92%
DATE	→ o + CARDINAL	1	14977	0.00%	98.92%
DATE	→ SEASON + DATE	1	14977	0.00%	98.92%
MUSEUM	→ NORP:OTHER + CORP JARGON	1	12	0.00%	98.92%
PER	→ HON + FIRST + NAMEMOD	1	14911	0.00%	98.92%
ORG:CORP	→ o + ORDINAL + o + CORP JARGON + CORP JAR- GON	1	14664	0.00%	98.92%
DATE	→ o + DAY + o + NUMDAY + REL + DURATION	1	14977	0.00%	98.92%
EVENT	→ MONTH + NUMDAY + o	1	148	0.00%	98.93%
NUMDAY	→ NUMDAY + o + NUMDAY + o + NUMDAY	1	11	0.00%	98.93%
PERIODIC	→ RATE + o + DURATION	1	175	0.00%	98.93%
DATE:OTHER	→ REL + EVENT	1	46	0.00%	98.93%
PERIODIC	→ o + PERIODIC	1	175	0.00%	98.93%
PRODUCT:FOOD	→ CARDINAL + o	1	5	0.00%	98.93%
ORG:CORP	→ NAME + CORP JARGON + o + COUNTRY + o	1	14664	0.00%	98.93%
MONEY	→ QUAL + QUAL + MONEY	1	12580	0.00%	98.93%
PERIODIC	→ MONTH + NUMDAY + o + DATE + o + DATE + o + DATE	1	175	0.00%	98.93%
HURRICANE	→ NAME + NAME	1	104	0.00%	98.94%
EVENT	→ MONTH + NUMDAY + o + CITY	1	148	0.00%	98.94%
CITY	→ HON + FIRST	1	3	0.00%	98.94%
DATE	→ REL + SPORTS SEASON	1	14977	0.00%	98.94%
FILM	→ CITY	1	21	0.00%	98.94%
DURATION	→ FIRST + DURATION	1	4081	0.00%	98.94%
GOVERNMENT	→ NAME + o + CORP JARGON + o	1	837	0.00%	98.94%
QUANTITY:1D	→ CARDINAL + DURATION	1	156	0.00%	98.94%
CARDINAL	→ DURATION + o + CARDINAL	1	10103	0.00%	98.94%
PER	→ FIRST + ANIMATE	1	14911	0.00%	98.95%
WOA	→ ORG:CORP + o	1	64	0.00%	98.95%
PER	→ FIRST + GOVERNMENT	1	14911	0.00%	98.95%
EVENT	→ o + CITY + o	1	148	0.00%	98.95%
DATE	→ DURATION + o + DATE + o + YEAR	1	14977	0.00%	98.95%
WOA	→ DAY + DURATION	1	64	0.00%	98.95%
ORG:CORP	→ MEDIA + CORP JARGON + o	1	14664	0.00%	98.95%
ORG:CORP	→ CITY + o + OCEAN	1	14664	0.00%	98.95%
CARDINAL	→ MONEY	1	10103	0.00%	98.95%

rule	children	count	of	% total	cumul've
DURATION	→ FOLD + o + DURATION	1	4081	0.00%	98.95%
ORG:RELIGIOUS	→ NAME	1	25	0.00%	98.96%
MONEY	→ o + MONEY	1	12580	0.00%	98.96%
ORG:CORP	→ GRP:LOC + o + CORP JARGON	1	14664	0.00%	98.96%
DURATION	→ REL + DURATION + o	1	4081	0.00%	98.96%
ORG:CORP	→ o + NORP:OTHER + CORP JARGON	1	14664	0.00%	98.96%
NORP:POLITICAL	→ GOVERNMENT + NORP:POLITICAL	1	4	0.00%	98.96%
PERIODIC	→ o + DAY + DURATION	1	175	0.00%	98.96%
DURATION	→ QUAL + DURATION + REL	1	4081	0.00%	98.96%
VEHICLE	→ ORG:CORP + NORP:OTHER	1	124	0.00%	98.96%
ORG:CORP	→ OCEAN + NAME + o + CORP JARGON	1	14664	0.00%	98.97%
DATE	→ QUAL + DATE + o + MONTH	1	14977	0.00%	98.97%
PER	→ o + NICKNAME + o + NAME	1	14911	0.00%	98.97%
MEDIA	→ CITY + o + STATE + o	1	661	0.00%	98.97%
DURATION	→ CARDINAL + o + CARDINAL + DURATION	1	4081	0.00%	98.97%
WOA	→ CITY + o + HURRICANE + o	1	64	0.00%	98.97%
GPE	→ CITY + o + GPE	1	12	0.00%	98.97%
CARDINAL	→ QUAL + o + QUAL + CARDINAL	1	10103	0.00%	98.97%
PAINTING	→ FIRST + o + FIRST + o	1	6	0.00%	98.97%
WOA	→ LAW + o	1	64	0.00%	98.98%
DATE	→ EVENT + o + DATE	1	14977	0.00%	98.98%
ORG:CORP	→ ORG:CORP + CORP JARGON	1	14664	0.00%	98.98%
BRIDGE	→ GRP:LOC + o	1	22	0.00%	98.98%
REGION	→ o + OCEAN + o	1	185	0.00%	98.98%
TIME	→ REL + o + DURATION	1	98	0.00%	98.98%
REGION	→ o + REGION	1	185	0.00%	98.98%
PERIODIC	→ DURATION + DURATION	1	175	0.00%	98.98%
EVENT	→ EVENT + o	1	148	0.00%	98.98%
ORG:CORP	→ OCEAN + ORDINAL + o	1	14664	0.00%	98.99%
GOVERNMENT	→ o + NAME + o + CORP JARGON	1	837	0.00%	98.99%
FACILITY	→ CARDINAL + o	1	67	0.00%	98.99%
PRODUCT:OTHER	→ PER + o + CARDINAL	1	161	0.00%	98.99%
DATE	→ RATE + DURATION	1	14977	0.00%	98.99%
LAW	→ NATIONALITY + o + DATE	1	221	0.00%	98.99%
WOA	→ o + CARDINAL + o	1	64	0.00%	98.99%
ORG:CORP	→ CARDINAL + o	1	14664	0.00%	98.99%
DATE	→ REL + DURATION + QUAL	1	14977	0.00%	98.99%
DAY	→ SEASON	1	14	0.00%	98.99%
PERIODIC	→ PERIODIC + QUAL	1	175	0.00%	99.00%

rule	children	count	of	% total	cumul've
NAME	→ NORP:OTHER	1	2600	0.00%	99.00%
WOA	→ o + YEAR	1	64	0.00%	99.00%
PRODUCT:OTHER	→ NATIONALITY + o	1	161	0.00%	99.00%
ORG:OTHER	→ BUILDING	1	316	0.00%	99.00%
FACILITY	→ o + ORDINAL	1	67	0.00%	99.00%
ORG:CORP	→ ORG:CORP + COUNTRY + CORP JARGON	1	14664	0.00%	99.00%
ORG:CORP	→ o + UNIT + CORP JARGON	1	14664	0.00%	99.00%
INDEX	→ o + CARDINAL + o	1	535	0.00%	99.00%
LAW	→ NATIONALITY + LAW	1	221	0.00%	99.01%
DATE	→ REL + o + DATE + o + DATE	1	14977	0.00%	99.01%
ROLE	→ RELIGION + ROLE	1	629	0.00%	99.01%
OCEAN	→ o + OCEAN	1	4	0.00%	99.01%
FILM	→ CARDINAL + o	1	21	0.00%	99.01%
ORG:CORP	→ CONTINENT + CORP JARGON	1	14664	0.00%	99.01%
RATE	→ MONEY + o + QUANTITY:3D + o	1	2107	0.00%	99.01%
ORG:OTHER	→ CORP JARGON + o + NORP:OTHER + o	1	316	0.00%	99.01%
DATE	→ REL + PRODUCT:DRUG	1	14977	0.00%	99.01%
VEHICLE	→ NAME + VEHICLE	1	124	0.00%	99.02%
CAPITAL	→ CITY	1	3	0.00%	99.02%
PERIODIC	→ QUAL + o + DAY	1	175	0.00%	99.02%
DAY	→ REL + DAY	1	14	0.00%	99.02%
ROLE	→ NATIONALITY + ROLE + o + COUNTRY	1	629	0.00%	99.02%
ORG:OTHER	→ NAME + CORP JARGON + CORP JARGON	1	316	0.00%	99.02%
FUND	→ CITY + o	1	34	0.00%	99.02%
GRP:ORG	→ CITY + o + CARDINAL	1	401	0.00%	99.02%
PERIODIC	→ CARDINAL + DURATION	1	175	0.00%	99.02%
ORG:CORP	→ CITY + o + CORP JARGON + o + CONTINENT + o + CORP JARGON	1	14664	0.00%	99.03%
MONTH	→ MONTH + o + MONEY	1	29	0.00%	99.03%
PAINTING	→ o + CARDINAL	1	6	0.00%	99.03%
DATE:OTHER	→ REL + o + DURATION	1	46	0.00%	99.03%
TIME	→ o + TIME + o + TIME + o	1	98	0.00%	99.03%
RATE	→ DURATION	1	2107	0.00%	99.03%
TV SHOW	→ o + COUNTRY	1	67	0.00%	99.03%
DURATION	→ o + REL + DURATION	1	4081	0.00%	99.03%
ORG:CORP	→ COUNTRY + NORP:OTHER + o	1	14664	0.00%	99.03%
SPORTS TEAM	→ STATE + o	1	68	0.00%	99.03%
DURATION	→ CARDINAL + CARDINAL + DURATION	1	4081	0.00%	99.04%
SPORTS EVENT	→ o + SEASON + o	1	27	0.00%	99.04%

rule	children	count	of	% total	cumul've
DATE	→ o + DURATION + o + REL + o + DURATION + o + DATE	1	14977	0.00%	99.04%
ORG:CORP	→ NAME + o + LOCATION:OTHER	1	14664	0.00%	99.04%
ORG:OTHER	→ NATIONALITY + o + DISEASE + o	1	316	0.00%	99.04%
NAME	→ CORP JARGON	1	2600	0.00%	99.04%
MONEY	→ QUAL + MONEY + o + MONEY + o + MONEY	1	12580	0.00%	99.04%
ORG:OTHER	→ NATIONALITY + CORP JARGON	1	316	0.00%	99.04%
NAME	→ FIRST + LANGUAGE	1	2600	0.00%	99.04%
DURATION	→ QUAL + CARDINAL	1	4081	0.00%	99.05%
FUND	→ ORG:CORP + o + MONEY + FUND	1	34	0.00%	99.05%
PAINTING	→ o + NATIONALITY + o	1	6	0.00%	99.05%
GRP:PER	→ PER + o	1	124	0.00%	99.05%
DATE	→ REL + o + REL + o + DURATION	1	14977	0.00%	99.05%
SUBURB	→ NAME	1	2	0.00%	99.05%
ANIMATE	→ NICKNAME	1	14	0.00%	99.05%
DATE	→ CARDINAL + DATE + DURATION	1	14977	0.00%	99.05%
ORG:CORP	→ ORG:CORP	1	14664	0.00%	99.05%
ORG:POLITICAL	→ GPE + o	1	74	0.00%	99.06%
PLAY	→ o + PER + o	1	5	0.00%	99.06%
LOCATION:OTHER	→ NORP:OTHER + o	1	72	0.00%	99.06%
DATE	→ ORDINAL + DATE	1	14977	0.00%	99.06%
DATE	→ NORP:OTHER + o + DURATION	1	14977	0.00%	99.06%
DATE	→ o + NUMDAY + DURATION	1	14977	0.00%	99.06%
PERIODIC	→ DAY + o	1	175	0.00%	99.06%
IPOINTS	→ QUAL + UNIT	1	2221	0.00%	99.06%
STREET	→ ORG:CORP + o	1	92	0.00%	99.06%
TV SHOW	→ FIRST + o	1	67	0.00%	99.06%
DATE	→ ORDINAL + DURATION + o + DAY + o	1	14977	0.00%	99.07%
MONTH	→ DURATION	1	29	0.00%	99.07%
HOSPITAL	→ ORG:EDU + o	1	22	0.00%	99.07%
ORG:CORP	→ ORDINAL + NAME	1	14664	0.00%	99.07%
RATE	→ MONEY + CARDINAL + DURATION	1	2107	0.00%	99.07%
NATURAL DISASTER	→ CITY + o	1	1	0.00%	99.07%
PER	→ ROLE + PER + o + NORP:POLITICAL + o + STATE + o + PER + o + NORP:POLITICAL + o + STATE + o	1	14911	0.00%	99.07%
ORG:OTHER	→ o + STATE + o	1	316	0.00%	99.07%
NAME	→ o + INI + NAME	1	2600	0.00%	99.07%
DATE	→ REL + o + DAY + o + DURATION	1	14977	0.00%	99.08%
GRP:PER	→ GPE	1	124	0.00%	99.08%

rule	children	count	of	% total	cumul've
ORG:CORP	→ ORDINAL + GPE + CORP JARGON + o	1	14664	0.00%	99.08%
SONG	→ o + NAME	1	9	0.00%	99.08%
MONTH	→ MONTH + o + MONTH	1	29	0.00%	99.08%
DATE	→ o + CORP JARGON + DURATION	1	14977	0.00%	99.08%
FIRST	→ CITY + ROLE	1	25	0.00%	99.08%
MONEY	→ NATIONALITY + o	1	12580	0.00%	99.08%
ORG:CORP	→ o + CORP JARGON + o + COUNTRY + o	1	14664	0.00%	99.08%
PERCENT	→ UNIT	1	6510	0.00%	99.09%
ORG:CORP	→ CITY + o + NORP:OTHER + o + CORP JARGON + o	1	14664	0.00%	99.09%
ROLE	→ ROLE + PER + o + STATE	1	629	0.00%	99.09%
PER	→ HON + ROLE	1	14911	0.00%	99.09%
ORG:CORP	→ o + LAST	1	14664	0.00%	99.09%
MEDIA	→ NORP:OTHER	1	661	0.00%	99.09%
DATE	→ FIRST + DURATION	1	14977	0.00%	99.09%
EVENT	→ NAME + o + DURATION	1	148	0.00%	99.09%
MONEY	→ UNIT + CARDINAL + o + NATIONALITY + o	1	12580	0.00%	99.09%
MEDIA	→ o + CONTINENT + o	1	661	0.00%	99.10%
CARDINAL	→ QUAL + o + CARDINAL + CARDINAL + MULT	1	10103	0.00%	99.10%
ORG:CORP	→ ORG:CORP + o + CITY	1	14664	0.00%	99.10%
DATE	→ o + YEAR + o + DATE	1	14977	0.00%	99.10%
WOA	→ o + NAME + o + NAME	1	64	0.00%	99.10%
DATE	→ YEAR + MONTH	1	14977	0.00%	99.10%
WAR	→ EVENT + o	1	41	0.00%	99.10%
CARDINAL	→ QUAL + ADDRESS NON	1	10103	0.00%	99.10%
CAPITAL	→ CARDINAL + MULT	1	3	0.00%	99.10%
DATE	→ DURATION + REL + LAW + o + YEAR	1	14977	0.00%	99.10%
TIME	→ QUAL + o	1	98	0.00%	99.11%
LAW	→ CARDINAL + COUNTRY + CARDINAL	1	221	0.00%	99.11%
ORG:CORP	→ o + ORDINAL + o + CORP JARGON	1	14664	0.00%	99.11%
BRIDGE	→ CITY + o	1	22	0.00%	99.11%
INI	→ INI + o + INI	1	2	0.00%	99.11%
DATE	→ REL + REL + DAY	1	14977	0.00%	99.11%
DATE	→ MONTH + o + MONTH + o + YEAR	1	14977	0.00%	99.11%
DATE	→ REL + TIME	1	14977	0.00%	99.11%
DATE	→ DURATION + CARDINAL + o + CARDINAL	1	14977	0.00%	99.11%
NICKNAME	→ ROLE + o	1	14	0.00%	99.12%
PRODUCT:OTHER	→ NAME + o + LOCATION:OTHER	1	161	0.00%	99.12%
MONEY	→ QUAL + o + UNIT	1	12580	0.00%	99.12%

rule	children	count	of	% total	cumul've
WOA	→ STATE + o	1	64	0.00%	99.12%
PRODUCT:OTHER	→ COUNTRY + ORDINAL + o	1	161	0.00%	99.12%
ORG:CORP	→ ORG:CORP + DATE + o	1	14664	0.00%	99.12%
ORG:CORP	→ GRP:LOC	1	14664	0.00%	99.12%
OCEAN	→ NAME + o	1	4	0.00%	99.12%
CARDINAL	→ CARDINAL + CARDINAL + MULT	1	10103	0.00%	99.12%
RATE	→ DURATION + o	1	2107	0.00%	99.13%
ORG:CORP	→ CITY + o + REGION + o + CORP JARGON	1	14664	0.00%	99.13%
ROLE	→ ORG:CORP + ROLE + o + ROLE	1	629	0.00%	99.13%
WOA	→ o + DISEASE	1	64	0.00%	99.13%
PERIODIC	→ DATE + o + DATE	1	175	0.00%	99.13%
NAME	→ NAME + NAME + o + NAME + o + NAME + NAME	1	2600	0.00%	99.13%
MONEY	→ QUAL + MONEY + QUAL	1	12580	0.00%	99.13%
BUILDING	→ o + CARDINAL	1	55	0.00%	99.13%
DATE:OTHER	→ REL + DURATION + DURATION	1	46	0.00%	99.13%
NAME	→ NAME + CORP JARGON	1	2600	0.00%	99.14%
ORG:CORP	→ o + NORP:OTHER + COUNTRY + CORP JARGON	1	14664	0.00%	99.14%
DURATION	→ CARDINAL + SEASON	1	4081	0.00%	99.14%
RELIGION	→ NATIONALITY + o	1	2	0.00%	99.14%
EVENT	→ ORG:CORP + DATE + o	1	148	0.00%	99.14%
WEIGHT	→ MULT + o + UNIT	1	273	0.00%	99.14%
ORG:CORP	→ COUNTRY + o + CARDINAL	1	14664	0.00%	99.14%
DATE	→ DURATION + o + REL + DATE	1	14977	0.00%	99.14%
PRODUCT:OTHER	→ DATE + NAME + o	1	161	0.00%	99.14%
PER	→ FIRST + MIDDLE + NAME + NAME	1	14911	0.00%	99.14%
RATE	→ o + WEIGHT	1	2107	0.00%	99.15%
DATE	→ DURATION + o + YEAR + o + YEAR	1	14977	0.00%	99.15%
DATE	→ MONTH + o + NUMDAY	1	14977	0.00%	99.15%
DATE	→ ORDINAL + DURATION + o + REL + o + DURATION	1	14977	0.00%	99.15%
RATE	→ o + QUANTITY:1D	1	2107	0.00%	99.15%
FUND	→ NAME + DISEASE + o	1	34	0.00%	99.15%
AGE	→ AGE + o + QUAL	1	438	0.00%	99.15%
QUANTITY:1D	→ CARDINAL + o + CARDINAL + UNIT	1	156	0.00%	99.15%
SONG	→ FIRST + INI + NAME	1	9	0.00%	99.15%
RATE	→ QUANTITY:OTHER + o	1	2107	0.00%	99.16%
PRODUCT:OTHER	→ ORG:CORP + o + UNIT	1	161	0.00%	99.16%
NAME	→ HON + o + NAME	1	2600	0.00%	99.16%
HOTEL	→ NAME + CORP JARGON	1	28	0.00%	99.16%

rule	children	count	of	% total	cumul've
ORG:CORP	→ NAME + CONTINENT + o + CORP JARGON	1	14664	0.00%	99.16%
IPOINTS	→ CARDINAL + CARDINAL	1	2221	0.00%	99.16%
POINTS	→ CARDINAL + COUNTRY	1	24	0.00%	99.16%
ORG:CORP	→ PRODUCT:OTHER	1	14664	0.00%	99.16%
MEDIA	→ ARMY + o	1	661	0.00%	99.16%
FILM	→ FIRST	1	21	0.00%	99.17%
RATE	→ WEIGHT + PERIODIC	1	2107	0.00%	99.17%
DATE	→ REL + o + WAR	1	14977	0.00%	99.17%
MONEY	→ MULT + o + UNIT	1	12580	0.00%	99.17%
TIME	→ CARDINAL	1	98	0.00%	99.17%
WOA	→ DATE + o + DATE + o + DATE	1	64	0.00%	99.17%
PRODUCT:OTHER	→ TV SHOW	1	161	0.00%	99.17%
FUND	→ NATIONALITY + o	1	34	0.00%	99.17%
PERIODIC	→ o + DAY	1	175	0.00%	99.17%
HURRICANE	→ NAME	1	104	0.00%	99.17%
ORG:CORP	→ BRIDGE	1	14664	0.00%	99.18%
QUANTITY:OTHER	→ CARDINAL + o + CARDINAL + o	1	30	0.00%	99.18%
PERCENT	→ CARDINAL + TIME + o + CARDINAL + UNIT	1	6510	0.00%	99.18%
ORDINAL	→ QUAL + ORDINAL	1	30	0.00%	99.18%
TIME	→ TIME + o + NORP:OTHER + o + OCEAN	1	98	0.00%	99.18%
AGE	→ QUAL + o + CARDINAL	1	438	0.00%	99.18%
PER	→ NAME + NAME	1	14911	0.00%	99.18%
DATE	→ MONTH + o + NUMDAY + o + YEAR	1	14977	0.00%	99.18%
CORP JARGON	→ o + NATIONALITY + CORP JARGON	1	1	0.00%	99.18%
ORG:CORP	→ o + NORP:OTHER + COUNTRY + CORP JARGON	1	14664	0.00%	99.19%
	+ o				
ARMY	→ o + COUNTRY	1	16	0.00%	99.19%
AWARD	→ o + DURATION	1	14	0.00%	99.19%
ORG:CORP	→ CARDINAL + CARDINAL + CARDINAL + o + CORP	1	14664	0.00%	99.19%
	JARGON				
BOOK	→ o + ORG:POLITICAL + o	1	49	0.00%	99.19%
TIME	→ TIME + o + CITY + o	1	98	0.00%	99.19%
GOVERNMENT	→ RIVER + o	1	837	0.00%	99.19%
GPE	→ GPE + o + ORDINAL	1	12	0.00%	99.19%
RATE	→ MONTH + o + UNIT	1	2107	0.00%	99.19%
PERIODIC	→ o + DURATION + o + MONTH	1	175	0.00%	99.20%
TV SHOW	→ DATE + o	1	67	0.00%	99.20%
REGION	→ REGION + o	1	185	0.00%	99.20%
ORG:CORP	→ HURRICANE + CORP JARGON	1	14664	0.00%	99.20%

rule	children	count	of	% total	cumul've
EVENT	→ CITY	1	148	0.00%	99.20%
POINTS	→ CARDINAL + CARDINAL	1	24	0.00%	99.20%
STREET	→ o + PER	1	92	0.00%	99.20%
ORG:CORP	→ NORP:OTHER + o + COUNTRY + o	1	14664	0.00%	99.20%
PER	→ NICKNAME + o + NAME	1	14911	0.00%	99.20%
ORG:OTHER	→ PER + o + PER	1	316	0.00%	99.21%
WOA	→ ORDINAL + o + WOA	1	64	0.00%	99.21%
DATE	→ CARDINAL + DATE + REL	1	14977	0.00%	99.21%
ORG:CORP	→ ORDINAL + REGION + o + CORP JARGON + o	1	14664	0.00%	99.21%
ORG:CORP	→ o + CORP JARGON + o + CORP JARGON	1	14664	0.00%	99.21%
TV SHOW	→ o + YEAR + o	1	67	0.00%	99.21%
PERCENT	→ CARDINAL + CARDINAL + UNIT	1	6510	0.00%	99.21%
DATE	→ MONTH + o + MONTH + YEAR	1	14977	0.00%	99.21%
PER	→ FIRST + REL	1	14911	0.00%	99.21%
ORG:CORP	→ ORDINAL + STATE + o + CORP JARGON	1	14664	0.00%	99.21%
GOVERNMENT	→ ORG:OTHER + o	1	837	0.00%	99.22%
INDEX	→ GOVERNMENT + o	1	535	0.00%	99.22%
CONTINENT	→ o + COUNTRY	1	3	0.00%	99.22%
DATE	→ YEAR + o	1	14977	0.00%	99.22%
ORG:OTHER	→ o + SPORTS EVENT + o	1	316	0.00%	99.22%
MEDIA	→ DATE + NAME + o + CORP JARGON + o	1	661	0.00%	99.22%
DATE	→ ORDINAL + DURATION + o + DATE + o + MONTH	1	14977	0.00%	99.22%
ORG:CORP	→ o + NATIONALITY + LOCATION:OTHER + o	1	14664	0.00%	99.22%
IPOINTS	→ FIRST	1	2221	0.00%	99.22%
GRP:LOC	→ GPE + o + CITY	1	18	0.00%	99.23%
DURATION	→ REGION + DURATION	1	4081	0.00%	99.23%
WOA	→ NICKNAME + o	1	64	0.00%	99.23%
RATE	→ NAME	1	2107	0.00%	99.23%
HOTEL	→ NORP:OTHER + o	1	28	0.00%	99.23%
DATE	→ DURATION + o + DATE + o + DATE	1	14977	0.00%	99.23%
RATE	→ FOLD + o + DURATION	1	2107	0.00%	99.23%
EVENT	→ ROLE + o	1	148	0.00%	99.23%
ORG:OTHER	→ ORG:EDU + o	1	316	0.00%	99.23%
BOOK	→ o + REGION	1	49	0.00%	99.24%
RATE	→ MONEY + o + QUAL + UNIT	1	2107	0.00%	99.24%
LAW	→ YEAR + o	1	221	0.00%	99.24%
TIME	→ o + TIME + o + TIME	1	98	0.00%	99.24%
BOOK	→ YEAR	1	49	0.00%	99.24%
ORG:OTHER	→ o + FILM	1	316	0.00%	99.24%

rule	children	count	of	% total	cumul've
ELECTRONICS	→ ELECTRONICS + ELECTRONICS	1	58	0.00%	99.24%
NORP:POLITICAL	→ NATIONALITY + o	1	4	0.00%	99.24%
MONEY	→ QUAL + CARDINAL + MULT + UNIT	1	12580	0.00%	99.24%
TV SHOW	→ o + DURATION	1	67	0.00%	99.25%
BOOK	→ o + CARDINAL + o	1	49	0.00%	99.25%
ORG:RELIGIOUS	→ o + PER + o	1	25	0.00%	99.25%
CARDINAL	→ QUAL + QUAL + o + CARDINAL	1	10103	0.00%	99.25%
ROLE	→ ROLE + ORG:CORP	1	629	0.00%	99.25%
PLAY	→ ORDINAL + o	1	5	0.00%	99.25%
HOSPITAL	→ NAME + o + CORP JARGON	1	22	0.00%	99.25%
NAME	→ INI	1	2600	0.00%	99.25%
WAR	→ NATIONALITY + o	1	41	0.00%	99.25%
ORG:OTHER	→ o + NATIONALITY	1	316	0.00%	99.25%
DATE	→ PERIODIC + DURATION	1	14977	0.00%	99.26%
DATE	→ YEAR + SEASON	1	14977	0.00%	99.26%
ORG:CORP	→ o + COUNTRY + o + CORP JARGON + o	1	14664	0.00%	99.26%
CARDINAL	→ CARDINAL + o + FIRST	1	10103	0.00%	99.26%
DATE	→ NUMDAY + o + MONTH	1	14977	0.00%	99.26%
ROLE	→ VEHICLE + ROLE	1	629	0.00%	99.26%
ORG:CORP	→ o + CHEMICAL	1	14664	0.00%	99.26%
PER	→ FIRST + INI + NAME + o + NAMEMOD	1	14911	0.00%	99.26%
DATE	→ REL + o + QUAL + MONTH	1	14977	0.00%	99.26%
QUAL	→ CARDINAL + UNIT + QUAL	1	6	0.00%	99.27%
DATE:OTHER	→ TIME + o + DURATION	1	46	0.00%	99.27%
DATE:OTHER	→ ORDINAL + o + DURATION	1	46	0.00%	99.27%
MONEY	→ CARDINAL + o + CARDINAL + o + UNIT	1	12580	0.00%	99.27%
LOCATION:OTHER	→ o + LOCATION:OTHER	1	72	0.00%	99.27%
PER	→ FIRST + NAME + NAMEMOD + o	1	14911	0.00%	99.27%
DATE	→ REL + REL + MONTH	1	14977	0.00%	99.27%
STREET	→ FIRST + o	1	92	0.00%	99.27%
FUND	→ NAME + STATE + o	1	34	0.00%	99.27%
IPOINTS	→ QUAL + CARDINAL	1	2221	0.00%	99.28%
DATE	→ DURATION + o + DURATION + o + DURATION	1	14977	0.00%	99.28%
PER	→ CARDINAL + UNIT	1	14911	0.00%	99.28%
RATE	→ MONEY + o + UNIT + o	1	2107	0.00%	99.28%
DATE	→ o + NUMDAY	1	14977	0.00%	99.28%
ORG:CORP	→ NAME + o + CITY + o	1	14664	0.00%	99.28%
PER	→ ROLE + ROLE + PER	1	14911	0.00%	99.28%
RATE	→ CARDINAL + o + CARDINAL	1	2107	0.00%	99.28%

rule	children	count	of	% total	cumul've
DATE	→ CARDINAL + REL	1	14977	0.00%	99.28%
FACILITY	→ BUILDING + o	1	67	0.00%	99.28%
ORG:CORP	→ CITY + OCEAN + o + CORP JARGON	1	14664	0.00%	99.29%
DATE	→ REL + o + YEAR + DURATION	1	14977	0.00%	99.29%
CONTINENT	→ CARDINAL + o	1	3	0.00%	99.29%
DATE	→ FIRST + DAY	1	14977	0.00%	99.29%
MEDIA	→ NATIONALITY + o + CORP JARGON	1	661	0.00%	99.29%
MEDIA	→ o + COUNTRY + o	1	661	0.00%	99.29%
ORG:CORP	→ ORG:CORP + o + CONTINENT + CORP JARGON	1	14664	0.00%	99.29%
ORG:CORP	→ NAME + NAME + NAME	1	14664	0.00%	99.29%
BOOK	→ COUNTRY + o	1	49	0.00%	99.29%
REGION	→ o + NAME	1	185	0.00%	99.30%
PERIODIC	→ ORDINAL + DURATION + o + PERIODIC	1	175	0.00%	99.30%
TIME	→ QUAL + o + DURATION	1	98	0.00%	99.30%
PER	→ ROLE + PER + o + PER + o + PER	1	14911	0.00%	99.30%
BOOK	→ BOOK + CARDINAL	1	49	0.00%	99.30%
DATE:OTHER	→ DURATION + CARDINAL	1	46	0.00%	99.30%
DURATION	→ CARDINAL + GOVERNMENT + DURATION	1	4081	0.00%	99.30%
CARDINAL	→ ORDINAL + MULT	1	10103	0.00%	99.30%
EVENT	→ DATE + ORG:POLITICAL + o	1	148	0.00%	99.30%
TIME	→ DURATION + REL + TIME + DATE	1	98	0.00%	99.31%
ORG:OTHER	→ NATIONALITY + ORG:OTHER	1	316	0.00%	99.31%
GRP:ORG	→ CORP JARGON	1	401	0.00%	99.31%
MONEY	→ NATIONALITY + UNIT	1	12580	0.00%	99.31%
BOOK	→ o + NAME + o	1	49	0.00%	99.31%
SPORTS TEAM	→ NORP:OTHER	1	68	0.00%	99.31%
ORG:CORP	→ CHANNEL	1	14664	0.00%	99.31%
BOOK	→ FIRST + NAME	1	49	0.00%	99.31%
PRODUCT:OTHER	→ o + ORDINAL + o	1	161	0.00%	99.31%
DAY	→ REL + o + DATE	1	14	0.00%	99.32%
ORG:CORP	→ COUNTRY + o + CORP JARGON + o	1	14664	0.00%	99.32%
PRODUCT:OTHER	→ o + COUNTRY	1	161	0.00%	99.32%
EVENT	→ o + DAY + o	1	148	0.00%	99.32%
MONEY	→ MONTH + o + MONEY	1	12580	0.00%	99.32%
GOVERNMENT	→ NATIONALITY + ORDINAL + o	1	837	0.00%	99.32%
DATE	→ ORDINAL + REL + DURATION	1	14977	0.00%	99.32%
QUANTITY:OTHER	→ CARDINAL + o	1	30	0.00%	99.32%
ORG:CORP	→ o + REGION + CORP JARGON + CORP JARGON	1	14664	0.00%	99.32%
DURATION	→ ORG:CORP + o + DURATION	1	4081	0.00%	99.32%

rule	children	count	of	% total	cumul've
SPORTS SEASON	→ REL + SPORTS SEASON	1	3	0.00%	99.33%
ORG:EDU	→ ORG:EDU + o + CITY	1	330	0.00%	99.33%
ORG:EDU	→ o + NATIONALITY + o	1	330	0.00%	99.33%
MONTH	→ QUAL + MONEY	1	29	0.00%	99.33%
TV SHOW	→ o + NAME	1	67	0.00%	99.33%
STADIUM	→ NAME + o	1	13	0.00%	99.33%
RATE	→ QUANTITY:3D + o + UNIT	1	2107	0.00%	99.33%
RATE	→ CARDINAL + RATE	1	2107	0.00%	99.33%
SPORTS EVENT	→ BRIDGE + o	1	27	0.00%	99.33%
SONG	→ SUBURB	1	9	0.00%	99.34%
ORG:CORP	→ o + NATIONALITY + CITY	1	14664	0.00%	99.34%
ELECTRONICS	→ NICKNAME	1	58	0.00%	99.34%
PER	→ ROLE + PER + o + PER	1	14911	0.00%	99.34%
DATE	→ YEAR + DATE + o + DATE	1	14977	0.00%	99.34%
DATE	→ ORDINAL + o + DATE	1	14977	0.00%	99.34%
PER	→ INI + o + NICKNAME + o + NAME + NAMEMOD	1	14911	0.00%	99.34%
QUANTITY:2D	→ CARDINAL + o + CARDINAL + UNIT	1	54	0.00%	99.34%
PER	→ ROLE + ROLE + NAME	1	14911	0.00%	99.34%
EVENT	→ DATE + NAME + o	1	148	0.00%	99.35%
WOA	→ o + COUNTRY	1	64	0.00%	99.35%
RELIGION	→ RELIGION + RELIGION	1	2	0.00%	99.35%
ORG:CORP	→ NAME + o + CORP JARGON + CORP JARGON + o	1	14664	0.00%	99.35%
PRODUCT:OTHER	→ NAME + LOCATION:OTHER + o	1	161	0.00%	99.35%
FACILITY	→ o + NAME	1	67	0.00%	99.35%
PER	→ ROLE + o + CITY	1	14911	0.00%	99.35%
ORG:OTHER	→ LOCATION:OTHER + o	1	316	0.00%	99.35%
ORG:CORP	→ OCEAN + PERIODIC + o	1	14664	0.00%	99.35%
DURATION	→ ORDINAL + REL + DURATION	1	4081	0.00%	99.36%
EVENT	→ ORDINAL + o + EVENT + o + WOA	1	148	0.00%	99.36%
PRODUCT:OTHER	→ HURRICANE	1	161	0.00%	99.36%
ORG:CORP	→ COUNTRY + o + CORP JARGON + o + COUNTRY	1	14664	0.00%	99.36%
	+ o				
BOOK	→ o + GOVERNMENT	1	49	0.00%	99.36%
DATE	→ DATE + o + DURATION + o	1	14977	0.00%	99.36%
ORG:CORP	→ FIRST + NAME + o	1	14664	0.00%	99.36%
ORG:CORP	→ ORG:CORP + CORP JARGON + o	1	14664	0.00%	99.36%
ORG:CORP	→ o + NORP:OTHER + o + CORP JARGON	1	14664	0.00%	99.36%
ORG:CORP	→ FIRST + NAME + o + CORP JARGON	1	14664	0.00%	99.36%
ORG:OTHER	→ DISEASE + o	1	316	0.00%	99.37%

rule	children	count	of	% total	cumul've
ORG:CORP	→ ORG:CORP + o + CONTINENT	1	14664	0.00%	99.37%
WOA	→ o + PER + o	1	64	0.00%	99.37%
ORG:OTHER	→ o + CORP JARGON + o	1	316	0.00%	99.37%
ELECTRONICS	→ ORG:CORP + ELECTRONICS	1	58	0.00%	99.37%
ORG:CORP	→ INI	1	14664	0.00%	99.37%
QUANTITY:3D	→ QUAL + CARDINAL + UNIT	1	143	0.00%	99.37%
ORG:POLITICAL	→ NAME + NORP:POLITICAL + o	1	74	0.00%	99.37%
GOVERNMENT	→ GOVERNMENT + o + GOVERNMENT + o + GOV- ERNMENT + o	1	837	0.00%	99.37%
DATE	→ DAY + TIME	1	14977	0.00%	99.38%
GRP:PER	→ HON + NAME	1	124	0.00%	99.38%
MONEY	→ QUAL + UNIT	1	12580	0.00%	99.38%
ORG:CORP	→ o + CARDINAL + STATE + CORP JARGON	1	14664	0.00%	99.38%
MONEY	→ UNIT + CARDINAL + o + UNIT + CARDINAL + MULT	1	12580	0.00%	99.38%
ROLE	→ NORP:OTHER + NORP:POLITICAL + ROLE	1	629	0.00%	99.38%
SONG	→ o + PER	1	9	0.00%	99.38%
BOOK	→ o + ORG:EDU	1	49	0.00%	99.38%
MONEY	→ QUAL + MONTH + o + MONEY	1	12580	0.00%	99.38%
ORG:CORP	→ NAME + o + STATE + o	1	14664	0.00%	99.39%
ORG:CORP	→ CITY + REGION + CORP JARGON	1	14664	0.00%	99.39%
TIME	→ TIME + o + TIME + o	1	98	0.00%	99.39%
QUANTITY:1D	→ o + DURATION	1	156	0.00%	99.39%
DATE	→ TIME + o + REL + DURATION	1	14977	0.00%	99.39%
DATE	→ TIME + MONTH + NUMDAY	1	14977	0.00%	99.39%
GOVERNMENT	→ o + NATIONALITY + o + CITY + o + STATE	1	837	0.00%	99.39%
INI	→ INI + INI	1	2	0.00%	99.39%
QUANTITY:1D	→ CARDINAL + INI	1	156	0.00%	99.39%
MONEY	→ CARDINAL + NUMDAY	1	12580	0.00%	99.39%
CARDINAL	→ CARDINAL + CARDINAL	1	10103	0.00%	99.40%
SPORTS EVENT	→ FACILITY + o	1	27	0.00%	99.40%
GOVERNMENT	→ GRP:LOC + o	1	837	0.00%	99.40%
PERCENT	→ CARDINAL + o + UNIT + QUAL	1	6510	0.00%	99.40%
ORG:OTHER	→ GOVERNMENT + o	1	316	0.00%	99.40%
TV SHOW	→ STREET + o	1	67	0.00%	99.40%
ANIMATE	→ NAME	1	14	0.00%	99.40%
EVENT	→ CITY + CARDINAL + o	1	148	0.00%	99.40%
ORG:CORP	→ NAME + o + CITY + CORP JARGON	1	14664	0.00%	99.40%
CARDINAL	→ FIRST + NAME	1	10103	0.00%	99.41%

rule	children	count	of	% total	cumul've
ORG:CORP	→ o + FIRST + CORP JARGON + o	1	14664	0.00%	99.41%
ORG:CORP	→ o + ORG:CORP + CORP JARGON + o	1	14664	0.00%	99.41%
GOVERNMENT	→ FACILITY	1	837	0.00%	99.41%
PER	→ PER + o + NORP:POLITICAL + o + STATE + o + PER + o + NORP:POLITICAL + o + STATE + o	1	14911	0.00%	99.41%
PERIODIC	→ DATE + DURATION	1	175	0.00%	99.41%
DURATION	→ o + DATE + o + DATE	1	4081	0.00%	99.41%
ORG:RELIGIOUS	→ GPE + o	1	25	0.00%	99.41%
COUNTRY	→ NATIONALITY + o	1	8	0.00%	99.41%
RATE	→ CARDINAL + o + ORG:CORP + o	1	2107	0.00%	99.42%
DURATION	→ CARDINAL + DURATION + QUAL	1	4081	0.00%	99.42%
INDEX	→ DATE + o	1	535	0.00%	99.42%
DATE	→ DURATION + o + SPORTS SEASON	1	14977	0.00%	99.42%
FILM	→ TIME + o	1	21	0.00%	99.42%
NAME	→ INI + o + FIRST + INI + NAME	1	2600	0.00%	99.42%
DATE	→ DURATION + o + DURATION + REL	1	14977	0.00%	99.42%
YEAR	→ MONEY + o + WEIGHT	1	8	0.00%	99.42%
PAINTING	→ o + FIRST + o	1	6	0.00%	99.42%
DURATION	→ CARDINAL + MULT + DURATION + REL	1	4081	0.00%	99.43%
LAW	→ REGION + o	1	221	0.00%	99.43%
ORG:CORP	→ o + STATE + o + CORP JARGON	1	14664	0.00%	99.43%
ORG:CORP	→ CARDINAL	1	14664	0.00%	99.43%
YEAR	→ DATE + o + DATE	1	8	0.00%	99.43%
ROLE	→ ROLE + NAME	1	629	0.00%	99.43%
STATE	→ NATIONALITY + REGION	1	4	0.00%	99.43%
QUANTITY:OTHER	→ QUANTITY:OTHER + o + QUANTITY:2D	1	30	0.00%	99.43%
NATIONALITY	→ NATIONALITY + o + NATIONALITY	1	2	0.00%	99.43%
FILM	→ STATE + o	1	21	0.00%	99.43%
WEIGHT	→ QUAL + o + WEIGHT	1	273	0.00%	99.44%
DATE	→ DATE + o + EVENT	1	14977	0.00%	99.44%
PER	→ INI + MIDDLE + LANGUAGE	1	14911	0.00%	99.44%
DATE	→ REL + CARDINAL + o + DURATION	1	14977	0.00%	99.44%
WOA	→ o + STATE	1	64	0.00%	99.44%
BOOK	→ o + NORP:OTHER + o + COUNTRY + o	1	49	0.00%	99.44%
TIME	→ QUAL + CARDINAL + o	1	98	0.00%	99.44%
FACILITY	→ o + STATE + o	1	67	0.00%	99.44%
EVENT	→ ORDINAL + o	1	148	0.00%	99.44%
CARDINAL	→ MULT + o	1	10103	0.00%	99.45%
AIRPORT	→ NAME + o + NAME + o	1	28	0.00%	99.45%

rule	children	count	of	% total	cumul've
RATE	→ CARDINAL	1	2107	0.00%	99.45%
SONG	→ o + NATIONALITY + o	1	9	0.00%	99.45%
NORP:POLITICAL	→ RELIGION + NORP:POLITICAL	1	4	0.00%	99.45%
MONEY	→ o + QUAL + o + MONEY	1	12580	0.00%	99.45%
TV SHOW	→ DURATION	1	67	0.00%	99.45%
ORG:CORP	→ NAME + o + GPE + o + CORP JARGON	1	14664	0.00%	99.45%
RATE	→ MONEY + o + INDEX + o	1	2107	0.00%	99.45%
DATE	→ o + DURATION + DURATION + o + DATE	1	14977	0.00%	99.46%
ORG:CORP	→ ORG:CORP + ORG:CORP + o + CORP JARGON	1	14664	0.00%	99.46%
LAW	→ COUNTRY + o	1	221	0.00%	99.46%
ORG:OTHER	→ HURRICANE + o	1	316	0.00%	99.46%
FOLD	→ QUAL + o + FOLD	1	146	0.00%	99.46%
ORG:OTHER	→ NATIONALITY + o + CORP JARGON	1	316	0.00%	99.46%
LAW	→ o + CARDINAL + o + CARDINAL + o + WOA	1	221	0.00%	99.46%
RATE	→ CARDINAL + QUANTITY:OTHER + o + DURATION	1	2107	0.00%	99.46%
PER	→ FIRST + DURATION	1	14911	0.00%	99.46%
ORG:OTHER	→ EVENT + o	1	316	0.00%	99.47%
MONTH	→ MONEY + o + MONEY	1	29	0.00%	99.47%
ORG:POLITICAL	→ COUNTRY + o	1	74	0.00%	99.47%
ORG:RELIGIOUS	→ SUBURB + o	1	25	0.00%	99.47%
MONEY	→ QUAL + MONEY + o + MONEY + o	1	12580	0.00%	99.47%
ANIMATE	→ HON + NAME	1	14	0.00%	99.47%
MEDIA	→ DURATION	1	661	0.00%	99.47%
DATE	→ CARDINAL + DATE	1	14977	0.00%	99.47%
PLAY	→ o + EVENT + o	1	5	0.00%	99.47%
WOA	→ o + PER	1	64	0.00%	99.47%
SPORTS TEAM	→ GPE + o	1	68	0.00%	99.48%
MONEY	→ MULT	1	12580	0.00%	99.48%
SUBURB	→ o + CARDINAL	1	2	0.00%	99.48%
DATE	→ o + YEAR + o + MONTH + NUMDAY	1	14977	0.00%	99.48%
MONTH	→ QUAL + UNIT + CARDINAL + MULT	1	29	0.00%	99.48%
ORG:CORP	→ NAME + o + NAME + o + CORP JARGON + CORP JARGON	1	14664	0.00%	99.48%
NORP:POLITICAL	→ REL + o	1	4	0.00%	99.48%
PERIODIC	→ REL + PERIODIC	1	175	0.00%	99.48%
DATE	→ REL + DURATION + o	1	14977	0.00%	99.48%
GRP:ORG	→ REGION	1	401	0.00%	99.49%
ORG:CORP	→ ORG:CORP + o + COUNTRY + CORP JARGON	1	14664	0.00%	99.49%
ORG:CORP	→ CARDINAL + GRP:ORG	1	14664	0.00%	99.49%

rule	children	count	of	% total	cumul've
ORG:CORP	→ CONTINENT + o + CORP JARGON	1	14664	0.00%	99.49%
ORG:CORP	→ NAME + o + NAME + o + NAME + o + NAME +	1	14664	0.00%	99.49%
	CORP JARGON				
ORG:CORP	→ CORP JARGON + o + CITY	1	14664	0.00%	99.49%
NORP:OTHER	→ NATIONALITY + RELIGION	1	54	0.00%	99.49%
DURATION	→ MONEY + o + QUANTITY:OTHER	1	4081	0.00%	99.49%
BOOK	→ o + ORG:EDU + o	1	49	0.00%	99.49%
ORG:CORP	→ STATE + NATIONALITY + CORP JARGON	1	14664	0.00%	99.50%
FOLD	→ CARDINAL + o + CARDINAL	1	146	0.00%	99.50%
PER	→ MONTH	1	14911	0.00%	99.50%
BOOK	→ o + GOD + o + PER	1	49	0.00%	99.50%
ORG:CORP	→ NAME + NATIONALITY + o + CORP JARGON	1	14664	0.00%	99.50%
WOA	→ o + HURRICANE + o	1	64	0.00%	99.50%
SPORTS EVENT	→ YEAR + o	1	27	0.00%	99.50%
ROLE	→ ROLE + o + ARMY	1	629	0.00%	99.50%
AGE	→ o + AGE + o + AGE	1	438	0.00%	99.50%
PRODUCT:OTHER	→ o + ORDINAL + NAME	1	161	0.00%	99.50%
PLAY	→ REGION	1	5	0.00%	99.51%
WOA	→ o + AGE + o	1	64	0.00%	99.51%
MUSEUM	→ GPE + o	1	12	0.00%	99.51%
DATE	→ YEAR + DATE + DURATION	1	14977	0.00%	99.51%
FACILITY	→ ORG:CORP + o	1	67	0.00%	99.51%
MEDIA	→ o + ORG:OTHER	1	661	0.00%	99.51%
NUMDAY	→ NUMDAY + o + NUMDAY + o + NUMDAY + o +	1	11	0.00%	99.51%
	NUMDAY				
STATE	→ NATIONALITY + NAME	1	4	0.00%	99.51%
FACILITY	→ o + CITY	1	67	0.00%	99.51%
ORG:CORP	→ o + CITY + GPE	1	14664	0.00%	99.52%
DURATION	→ QUAL + QUAL + DURATION	1	4081	0.00%	99.52%
PERIODIC	→ CARDINAL + PERIODIC	1	175	0.00%	99.52%
MUSEUM	→ NORP:OTHER + o	1	12	0.00%	99.52%
DURATION	→ SEASON + o + SEASON	1	4081	0.00%	99.52%
PERIODIC	→ RATE + o + DATE	1	175	0.00%	99.52%
ORG:CORP	→ FUND + CORP JARGON	1	14664	0.00%	99.52%
ORG:EDU	→ o + NATIONALITY	1	330	0.00%	99.52%
EVENT	→ SEASON + o	1	148	0.00%	99.52%
ORG:POLITICAL	→ CITY	1	74	0.00%	99.53%
DATE	→ o + WAR	1	14977	0.00%	99.53%
PER	→ ORG:CORP	1	14911	0.00%	99.53%

rule	children	count	of	% total	cumul've
MEDIA	→ DAY + o	1	661	0.00%	99.53%
GRP:PER	→ o + NAME	1	124	0.00%	99.53%
RATE	→ o + MONEY	1	2107	0.00%	99.53%
ROLE	→ SPORTS TEAM + o	1	629	0.00%	99.53%
ORG:CORP	→ REGION + o + NAME	1	14664	0.00%	99.53%
AIRPORT	→ SUBURB + o	1	28	0.00%	99.53%
PER	→ ROLE + INI + o + FIRST + o + NAME	1	14911	0.00%	99.54%
ANIMATE	→ o + FIRST + o + NICKNAME + o + NAME + o	1	14	0.00%	99.54%
RATE	→ WEIGHT + o + PERIODIC	1	2107	0.00%	99.54%
BAND	→ o + NATIONALITY + CARDINAL + o	1	1	0.00%	99.54%
QUANTITY:3D	→ CARDINAL + o + CARDINAL + UNIT	1	143	0.00%	99.54%
DATE	→ REL + o + DURATION + QUAL	1	14977	0.00%	99.54%
GPE	→ NATIONALITY + o	1	12	0.00%	99.54%
ORG:CORP	→ o + NATIONALITY + ORDINAL + CITY + CORP	1	14664	0.00%	99.54%
	JARGON				
PER	→ ROLE + CARDINAL	1	14911	0.00%	99.54%
ORG:CORP	→ STATE + o + COUNTRY + CORP JARGON	1	14664	0.00%	99.54%
QUANTITY:3D	→ CARDINAL + WEIGHT + UNIT	1	143	0.00%	99.55%
QUANTITY:1D	→ CARDINAL + COUNTRY	1	156	0.00%	99.55%
PER	→ MIDDLE	1	14911	0.00%	99.55%
WOA	→ GOVERNMENT + o	1	64	0.00%	99.55%
DATE	→ CARDINAL + o + REL + CARDINAL + DURATION	1	14977	0.00%	99.55%
QUANTITY:2D	→ CARDINAL + CARDINAL	1	54	0.00%	99.55%
CARDINAL	→ CARDINAL + o + CARDINAL + o + CARDINAL +	1	10103	0.00%	99.55%
	o + CARDINAL				
ANIMATE	→ NORP:OTHER + o	1	14	0.00%	99.55%
GRP:ORG	→ GOVERNMENT + ROLE	1	401	0.00%	99.55%
HOSPITAL	→ STATE + o	1	22	0.00%	99.56%
DATE	→ DURATION + o + CITY + DAY	1	14977	0.00%	99.56%
PER	→ INI + MIDDLE + NAME + NAMEMOD + o	1	14911	0.00%	99.56%
DATE	→ DURATION + o + DURATION + o + MONTH +	1	14977	0.00%	99.56%
	NUMDAY				
MONEY	→ MONEY + o + DURATION	1	12580	0.00%	99.56%
DATE	→ DATE + o + REL	1	14977	0.00%	99.56%
IPOINTS	→ QUAL + IPOINTS + o + IPOINTS	1	2221	0.00%	99.56%
DATE	→ ORDINAL + CARDINAL	1	14977	0.00%	99.56%
ORG:CORP	→ NAME + GPE + o + CORP JARGON	1	14664	0.00%	99.56%
ORG:CORP	→ o + CONTINENT + o + CORP JARGON	1	14664	0.00%	99.57%

rule	children	count	of	% total	cumul've
DATE	→ DURATION + REL + DAY	1	14977	0.00%	99.57%
SPORTS EVENT	→ YEAR	1	27	0.00%	99.57%
DURATION	→ DURATION + REL + DAY	1	4081	0.00%	99.57%
EVENT	→ NORP:POLITICAL + o	1	148	0.00%	99.57%
EVENT	→ YEAR + o + CITY + o + COUNTRY	1	148	0.00%	99.57%
LOCATION:OTHER	→ o + CARDINAL	1	72	0.00%	99.57%
NAME	→ NAME + o + PER	1	2600	0.00%	99.57%
PER	→ o + ROLE + o + HON + NAME	1	14911	0.00%	99.57%
MEDIA	→ o + NATIONALITY	1	661	0.00%	99.58%
ORG:CORP	→ o + GPE + o + CORP JARGON + o	1	14664	0.00%	99.58%
MEDIA	→ CITY + DAY + o	1	661	0.00%	99.58%
GRP:ORG	→ ORG:CORP	1	401	0.00%	99.58%
PERCENT	→ CARDINAL + UNIT + QUAL	1	6510	0.00%	99.58%
ORG:OTHER	→ o + COUNTRY + o	1	316	0.00%	99.58%
PERIODIC	→ TIME + PERIODIC	1	175	0.00%	99.58%
DATE	→ REL + DATE + o + DATE	1	14977	0.00%	99.58%
MEDIA	→ o + NORP:OTHER + GRP:ORG + o + PERIODIC	1	661	0.00%	99.58%
ORG:RELIGIOUS	→ o + COUNTRY	1	25	0.00%	99.58%
NUMDAY	→ NUMDAY + o + NUMDAY + o + NUMDAY + o + NUMDAY + o + NUMDAY	1	11	0.00%	99.59%
ORG:CORP	→ LOCATION:OTHER + o + STATE	1	14664	0.00%	99.59%
FUND	→ NAME	1	34	0.00%	99.59%
MEDIA	→ ORG:CORP	1	661	0.00%	99.59%
EVENT	→ NAME + o	1	148	0.00%	99.59%
QUANTITY:OTHER	→ CARDINAL + MULT + UNIT	1	30	0.00%	99.59%
DATE	→ PERIODIC + REL	1	14977	0.00%	99.59%
ORG:CORP	→ COUNTRY + ORDINAL + o + CORP JARGON	1	14664	0.00%	99.59%
NAME	→ NAME + o + NAME + o + NAME + NAME + o + NAME	1	2600	0.00%	99.59%
QUANTITY:2D	→ CARDINAL	1	54	0.00%	99.60%
MEDIA	→ CONTINENT	1	661	0.00%	99.60%
GRP:PER	→ CITY + o	1	124	0.00%	99.60%
WOA	→ o + EVENT	1	64	0.00%	99.60%
DATE	→ REL + DURATION + o + REL	1	14977	0.00%	99.60%
PER	→ ROLE + INI + FIRST + NAME	1	14911	0.00%	99.60%
PRODUCT:DRUG	→ ORG:CORP + ROLE	1	2	0.00%	99.60%
EVENT	→ NATIONALITY + o + DURATION	1	148	0.00%	99.60%
DATE	→ REL + DURATION + o + TIME	1	14977	0.00%	99.60%
EVENT	→ YEAR + CITY + o	1	148	0.00%	99.61%

rule	children	count	of	% total	cumul've
DURATION	→ DURATION + o + DATE	1	4081	0.00%	99.61%
BOOK	→ PER + o + PER + o	1	49	0.00%	99.61%
ROLE	→ NATIONALITY + o + COUNTRY	1	629	0.00%	99.61%
DATE	→ REL + DURATION + DURATION	1	14977	0.00%	99.61%
PRODUCT:OTHER	→ FIRST	1	161	0.00%	99.61%
TV SHOW	→ o + DATE:OTHER	1	67	0.00%	99.61%
ORG:CORP	→ o + PER	1	14664	0.00%	99.61%
PER	→ NAME + o + NICKNAME + o	1	14911	0.00%	99.61%
ORG:EDU	→ REGION + o	1	330	0.00%	99.61%
DURATION	→ QUAL + DATE	1	4081	0.00%	99.62%
RATE	→ MONTH	1	2107	0.00%	99.62%
DATE	→ MONTH + o + YEAR	1	14977	0.00%	99.62%
GOVERNMENT	→ o + CORP JARGON + o	1	837	0.00%	99.62%
MONEY	→ CARDINAL + o + MONEY	1	12580	0.00%	99.62%
PER	→ INI + FIRST + LANGUAGE	1	14911	0.00%	99.62%
QUANTITY:1D	→ CARDINAL + MULT + UNIT	1	156	0.00%	99.62%
ORG:CORP	→ CONTINENT + o + CORP JARGON + o	1	14664	0.00%	99.62%
PER	→ o + NAME	1	14911	0.00%	99.62%
ORG:CORP	→ NAME + NATIONALITY	1	14664	0.00%	99.63%
MEDIA	→ o + NAME	1	661	0.00%	99.63%
PERIODIC	→ DURATION + o + DATE	1	175	0.00%	99.63%
ORG:CORP	→ NAME + o + GOVERNMENT	1	14664	0.00%	99.63%
DURATION	→ CARDINAL + UNIT	1	4081	0.00%	99.63%
ORG:CORP	→ ORDINAL + REGION + CORP JARGON	1	14664	0.00%	99.63%
MONEY	→ UNIT + o + MULT	1	12580	0.00%	99.63%
DATE	→ MONTH + NUMDAY + YEAR	1	14977	0.00%	99.63%
ORG:CORP	→ STATE + o + STATE + CORP JARGON	1	14664	0.00%	99.63%
DURATION	→ CARDINAL + o + CARDINAL	1	4081	0.00%	99.64%
ORG:OTHER	→ RIVER + o	1	316	0.00%	99.64%
SPORTS SEASON	→ CARDINAL + o + SPORTS SEASON	1	3	0.00%	99.64%
QUANTITY:2D	→ QUANTITY:1D + o + QUANTITY:1D	1	54	0.00%	99.64%
DURATION	→ CARDINAL + PERIODIC	1	4081	0.00%	99.64%
PERCENT	→ CARDINAL + UNIT + o + QUAL	1	6510	0.00%	99.64%
TV SHOW	→ o + NICKNAME	1	67	0.00%	99.64%
DATE	→ YEAR + o + REL	1	14977	0.00%	99.64%
STADIUM	→ DURATION + DATE	1	13	0.00%	99.64%
ORG:CORP	→ o + CITY + CORP JARGON + o	1	14664	0.00%	99.65%
PRODUCT:OTHER	→ ORG:OTHER + o	1	161	0.00%	99.65%
ROLE	→ STATE + NORP:POLITICAL + ROLE	1	629	0.00%	99.65%

rule	children	count	of	% total	cumul've
ORG:CORP	→ NORP:OTHER + COUNTRY + o + CORP JARGON	1	14664	0.00%	99.65%
WOA	→ DATE + o + CARDINAL	1	64	0.00%	99.65%
MONEY	→ CARDINAL + o + YEAR + o + UNIT	1	12580	0.00%	99.65%
ROLE	→ ORDINAL + o	1	629	0.00%	99.65%
MONEY	→ FOLD + o + MONEY	1	12580	0.00%	99.65%
NAME	→ NAME + NAME + NAME + NAME + NAME + o + NAME	1	2600	0.00%	99.65%
ORG:EDU	→ CITY + o + STATE + o	1	330	0.00%	99.65%
MONEY	→ QUAL + MONEY + o + NATIONALITY + o	1	12580	0.00%	99.66%
DATE	→ PERIODIC + o + DATE	1	14977	0.00%	99.66%
RATE	→ FOLD + o + UNIT	1	2107	0.00%	99.66%
PRODUCT:FOOD	→ o + NAME	1	5	0.00%	99.66%
DATE	→ CARDINAL + DURATION + o + MONTH	1	14977	0.00%	99.66%
HOSPITAL	→ o + STATE	1	22	0.00%	99.66%
PER	→ SEASON + FIRST + NAME	1	14911	0.00%	99.66%
ORG:OTHER	→ WAR + o	1	316	0.00%	99.66%
DATE	→ o + DATE + o + MONTH	1	14977	0.00%	99.66%
ORG:CORP	→ NATIONALITY + CORP JARGON	1	14664	0.00%	99.67%
DATE	→ DURATION + REL + EVENT + o + DATE	1	14977	0.00%	99.67%
MONEY	→ QUAL + QUAL + MONEY + o + MONEY	1	12580	0.00%	99.67%
DATE	→ o + DURATION + o + YEAR + o + YEAR	1	14977	0.00%	99.67%
DATE	→ UNIT + o + MONTH + NUMDAY	1	14977	0.00%	99.67%
ORG:CORP	→ GOVERNMENT + o + CORP JARGON + o	1	14664	0.00%	99.67%
ORG:CORP	→ INI + NAME + CORP JARGON	1	14664	0.00%	99.67%
DURATION	→ SEASON + DURATION	1	4081	0.00%	99.67%
LOCATION:OTHER	→ NATIONALITY + LOCATION:OTHER	1	72	0.00%	99.67%
BOOK	→ o + PER + o + COUNTRY	1	49	0.00%	99.68%
VEHICLE	→ DATE + o + CARDINAL	1	124	0.00%	99.68%
ORG:CORP	→ NAME + o + CORP JARGON + o + NATIONALITY + o	1	14664	0.00%	99.68%
VEHICLE	→ SPACE	1	124	0.00%	99.68%
ORG:CORP	→ CITY + COUNTRY + CORP JARGON	1	14664	0.00%	99.68%
ROLE	→ ROLE + PER	1	629	0.00%	99.68%
ORG:CORP	→ o + UNIT + o + COUNTRY	1	14664	0.00%	99.68%
ORG:OTHER	→ CITY + o + COUNTRY	1	316	0.00%	99.68%
DATE:OTHER	→ CARDINAL + REL + o + DATE:OTHER	1	46	0.00%	99.68%
TV SHOW	→ CARDINAL + DURATION	1	67	0.00%	99.69%
GRP:ORG	→ COUNTRY + o + CARDINAL	1	401	0.00%	99.69%
CARDINAL	→ ORG:EDU + MULT	1	10103	0.00%	99.69%

rule	children	count	of	% total	cumul've
MONEY	→ MONEY + o + QUAL	1	12580	0.00%	99.69%
PERCENT	→ CITY + UNIT	1	6510	0.00%	99.69%
ORG:OTHER	→ o + NAME + o	1	316	0.00%	99.69%
DATE	→ DURATION + REL + o + TIME + o	1	14977	0.00%	99.69%
DATE	→ QUAL + DAY	1	14977	0.00%	99.69%
FILM	→ o + FIRST + o + FIRST	1	21	0.00%	99.69%
TIME	→ REL + CARDINAL + DURATION	1	98	0.00%	99.69%
CARDINAL	→ CARDINAL + o + CARDINAL + MULT	1	10103	0.00%	99.70%
PERIODIC	→ o + ORG:EDU	1	175	0.00%	99.70%
TV SHOW	→ FIRST	1	67	0.00%	99.70%
FUND	→ STREET + o	1	34	0.00%	99.70%
PAINTING	→ NAME	1	6	0.00%	99.70%
NICKNAME	→ HON + MONTH	1	14	0.00%	99.70%
SPORTS TEAM	→ STATE + SPORTS TEAM	1	68	0.00%	99.70%
INDEX	→ GRP:ORG	1	535	0.00%	99.70%
EVENT	→ EVENT + o + DATE + o + EVENT + o + DATE	1	148	0.00%	99.70%
FACILITY	→ o + CARDINAL + o + CARDINAL	1	67	0.00%	99.71%
NORP:OTHER	→ NATIONALITY + o	1	54	0.00%	99.71%
PER	→ NAME + FIRST + MIDDLE	1	14911	0.00%	99.71%
BOOK	→ NORP:OTHER + o	1	49	0.00%	99.71%
DATE	→ LAW	1	14977	0.00%	99.71%
WEIGHT	→ CARDINAL + WEIGHT	1	273	0.00%	99.71%
ORG:CORP	→ NAME + CITY	1	14664	0.00%	99.71%
TIME	→ QUAL + TIME + o + TIME	1	98	0.00%	99.71%
DATE	→ DATE + REL + SEASON	1	14977	0.00%	99.71%
PRODUCT:OTHER	→ o + CARDINAL + o	1	161	0.00%	99.72%
MEDIA	→ GRP:ORG	1	661	0.00%	99.72%
QUANTITY:2D	→ CARDINAL + UNIT + o + CARDINAL + UNIT	1	54	0.00%	99.72%
ORG:CORP	→ o + PER + CORP JARGON	1	14664	0.00%	99.72%
DATE	→ DURATION + REL + o + EVENT	1	14977	0.00%	99.72%
WEIGHT	→ QUAL + WEIGHT + o + WEIGHT	1	273	0.00%	99.72%
DATE	→ DAY + o + DATE + o + YEAR	1	14977	0.00%	99.72%
CITY	→ GPE + o + CARDINAL	1	3	0.00%	99.72%
MONTH	→ CITY + o + CITY + o + CORP JARGON	1	29	0.00%	99.72%
EVENT	→ PERIODIC	1	148	0.00%	99.72%
VEHICLE	→ CARDINAL + o	1	124	0.00%	99.73%
PRODUCT:OTHER	→ GPE + o	1	161	0.00%	99.73%
VEHICLE	→ DATE + CARDINAL	1	124	0.00%	99.73%
ORG:CORP	→ ORDINAL + o + COUNTRY + o + CORP JARGON	1	14664	0.00%	99.73%

rule	children	count	of	% total	cumul've
PERIODIC	→ o + SEASON	1	175	0.00%	99.73%
QUAL	→ QUAL + CARDINAL	1	6	0.00%	99.73%
WOA	→ o + GOVERNMENT + o	1	64	0.00%	99.73%
RATE	→ CARDINAL + o + DATE	1	2107	0.00%	99.73%
PER	→ HON + FIRST + o + NAME	1	14911	0.00%	99.73%
AGE	→ CARDINAL + o + AGE	1	438	0.00%	99.74%
HOTEL	→ NAME + CITY	1	28	0.00%	99.74%
ORG:OTHER	→ ORG:OTHER + CITY + o + STATE	1	316	0.00%	99.74%
PER	→ FIRST + NICKNAME	1	14911	0.00%	99.74%
ORG:CORP	→ ORDINAL + o + CORP JARGON + o	1	14664	0.00%	99.74%
NAME	→ NAME	1	2600	0.00%	99.74%
QUANTITY:1D	→ CARDINAL + QUAL + UNIT	1	156	0.00%	99.74%
RATE	→ MONEY + o + CARDINAL	1	2107	0.00%	99.74%
QUANTITY:1D	→ QUAL + QUANTITY:1D	1	156	0.00%	99.74%
PRODUCT:OTHER	→ ANIMATE	1	161	0.00%	99.75%
DURATION	→ QUAL + o + DATE	1	4081	0.00%	99.75%
UNIT	→ BAND + UNIT	1	218	0.00%	99.75%
DATE:OTHER	→ ORDINAL + DURATION	1	46	0.00%	99.75%
DURATION	→ CAPITAL + DURATION	1	4081	0.00%	99.75%
WEIGHT	→ CAPITAL + UNIT	1	273	0.00%	99.75%
ATTRACTION	→ LOCATION:OTHER	1	11	0.00%	99.75%
ROLE	→ GOVERNMENT + ROLE + o + ROLE	1	629	0.00%	99.75%
BRIDGE	→ STREET + o	1	22	0.00%	99.75%
ORG:CORP	→ o + NATIONALITY + ORDINAL + CITY + CORP JARGON + o	1	14664	0.00%	99.76%
GOVERNMENT	→ STREET + o	1	837	0.00%	99.76%
NICKNAME	→ o + NATIONALITY	1	14	0.00%	99.76%
ORG:CORP	→ ORDINAL + CITY + o + CORP JARGON	1	14664	0.00%	99.76%
RATE	→ o + UNIT	1	2107	0.00%	99.76%
STADIUM	→ CITY	1	13	0.00%	99.76%
EVENT	→ STATE + o + PERCENT + EVENT + o	1	148	0.00%	99.76%
RATE	→ CARDINAL + o + COUNTRY + o + DURATION	1	2107	0.00%	99.76%
DURATION	→ QUAL + CARDINAL + o + DURATION	1	4081	0.00%	99.76%
ROLE	→ GOVERNMENT + o + ROLE	1	629	0.00%	99.76%
PER	→ HON + FIRST + INI + NAME	1	14911	0.00%	99.77%
LANGUAGE	→ DURATION + o	1	3	0.00%	99.77%
HON	→ NAME	1	3	0.00%	99.77%
ORG:CORP	→ o + NATIONALITY + o + GPE + CORP JARGON + o	1	14664	0.00%	99.77%

rule	children	count	of	% total	cumul've
WOA	→ o + PER + o + PER	1	64	0.00%	99.77%
PERIODIC	→ CARDINAL + o + DURATION	1	175	0.00%	99.77%
DURATION	→ YEAR + o + YEAR	1	4081	0.00%	99.77%
VEHICLE	→ DATE + o + ORG:CORP + CARDINAL	1	124	0.00%	99.77%
GOVERNMENT	→ o + NATIONALITY + o	1	837	0.00%	99.77%
ATTRACTION	→ CITY + o	1	11	0.00%	99.78%
DATE:OTHER	→ o + DATE	1	46	0.00%	99.78%
DATE	→ o + YEAR + DATE	1	14977	0.00%	99.78%
DATE	→ MONTH + NUMDAY + o + NUMDAY + o + NUMDAY + o + NUMDAY	1	14977	0.00%	99.78%
DAY	→ DURATION + REL	1	14	0.00%	99.78%
DATE	→ o + YEAR + ORDINAL + DURATION	1	14977	0.00%	99.78%
SONG	→ o + NORP:OTHER	1	9	0.00%	99.78%
ORG:CORP	→ ORG:CORP + o + GPE	1	14664	0.00%	99.78%
RIVER	→ DAY + o	1	21	0.00%	99.78%
ORG:CORP	→ NAME + CORP JARGON + o + CITY + o	1	14664	0.00%	99.79%
ORG:CORP	→ STATE + ORDINAL	1	14664	0.00%	99.79%
ORG:CORP	→ NORP:OTHER + NATIONALITY + CORP JARGON + o + COUNTRY + CORP JARGON	1	14664	0.00%	99.79%
GPE	→ o + FIRST + o	1	12	0.00%	99.79%
MONEY	→ UNIT + FIRST	1	12580	0.00%	99.79%
NATIONALITY	→ o + NATIONALITY	1	2	0.00%	99.79%
PRODUCT:OTHER	→ ORG:EDU + o	1	161	0.00%	99.79%
SPORTS EVENT	→ DATE + o	1	27	0.00%	99.79%
DATE	→ MONEY + o + DURATION	1	14977	0.00%	99.79%
NICKNAME	→ HON + LAW	1	14	0.00%	99.80%
ORG:CORP	→ CARDINAL + NAME	1	14664	0.00%	99.80%
AGE	→ CARDINAL + o + DURATION	1	438	0.00%	99.80%
PER	→ ORG:EDU + o + ROLE + o + PER	1	14911	0.00%	99.80%
DATE	→ DAY + o + DAY + o + MONTH + NUMDAY + o + NUMDAY	1	14977	0.00%	99.80%
RATE	→ QUANTITY:2D + o	1	2107	0.00%	99.80%
ORG:CORP	→ o + CARDINAL + o + STATE + CONTINENT	1	14664	0.00%	99.80%
DATE	→ DURATION + REL + DATE + o + IPOINTS + o	1	14977	0.00%	99.80%
PRODUCT:OTHER	→ NAME + o + LOCATION:OTHER + o	1	161	0.00%	99.80%
ORG:CORP	→ NORP:OTHER + NATIONALITY + CORP JARGON	1	14664	0.00%	99.80%
DATE	→ SEASON + o + REL	1	14977	0.00%	99.81%
GOVERNMENT	→ GOVERNMENT + o + GOVERNMENT	1	837	0.00%	99.81%

rule	children	count	of	% total	cumul've
DATE	→ ORDINAL + CARDINAL + o + MONTH + NUMDAY	1	14977	0.00%	99.81%
	+ o + YEAR				
PER	→ FIRST + NAME + o	1	14911	0.00%	99.81%
WOA	→ o + ORG:CORP + o + ORG:CORP + o	1	64	0.00%	99.81%
EVENT	→ MONTH + DURATION	1	148	0.00%	99.81%
WOA	→ COUNTRY + o + COUNTRY	1	64	0.00%	99.81%
ORG:RELIGIOUS	→ NATIONALITY + o	1	25	0.00%	99.81%
ORG:CORP	→ NAME + CONTINENT	1	14664	0.00%	99.81%
DATE	→ ORDINAL + CARDINAL + DURATION + DATE	1	14977	0.00%	99.82%
DATE	→ QUAL + MONTH + o + MONTH	1	14977	0.00%	99.82%
ORG:RELIGIOUS	→ NORP:OTHER + o	1	25	0.00%	99.82%
DATE	→ o + ORDINAL + DURATION + o + MONTH + NUM-	1	14977	0.00%	99.82%
	DAY				
ORG:CORP	→ STATE + OCEAN + CORP JARGON	1	14664	0.00%	99.82%
DATE	→ REL + o + MONTH + o	1	14977	0.00%	99.82%
ORG:CORP	→ NAME + o + NAME + o + NAME + o + NAME	1	14664	0.00%	99.82%
ORG:CORP	→ o + CARDINAL + o	1	14664	0.00%	99.82%
NORP:OTHER	→ NATIONALITY + NORP:OTHER	1	54	0.00%	99.82%
MONEY	→ o + UNIT	1	12580	0.00%	99.83%
ORG:CORP	→ INI + NAME	1	14664	0.00%	99.83%
WOA	→ GRP:ORG + o	1	64	0.00%	99.83%
PER	→ INI + FIRST + NAME + NAMEMOD	1	14911	0.00%	99.83%
LOCATION:OTHER	→ o + STATE	1	72	0.00%	99.83%
RATE	→ QUANTITY:3D + o + NORP:OTHER + o + DURA-	1	2107	0.00%	99.83%
	TION				
QUANTITY:3D	→ WEIGHT + o	1	143	0.00%	99.83%
DATE	→ REL + DURATION + DAY + o + ORG:CORP	1	14977	0.00%	99.83%
ROLE	→ o + GOVERNMENT + o	1	629	0.00%	99.83%
EVENT	→ ORDINAL + o + EVENT	1	148	0.00%	99.83%
PER	→ o + FIRST + o + NAME	1	14911	0.00%	99.84%
SPORTS EVENT	→ CITY + CARDINAL	1	27	0.00%	99.84%
ORG:CORP	→ RIVER + o	1	14664	0.00%	99.84%
SPORTS EVENT	→ CITY + o	1	27	0.00%	99.84%
WOA	→ EVENT + o	1	64	0.00%	99.84%
WOA	→ NAME + o + NAME	1	64	0.00%	99.84%
PRODUCT:DRUG	→ ROLE + FIRST + NAME	1	2	0.00%	99.84%
DURATION	→ DATE + DURATION	1	4081	0.00%	99.84%
DATE	→ EVENT + o + YEAR	1	14977	0.00%	99.84%

rule	children	count	of	% total	cumul've
QUAL	→ QUAL + o + QUAL	1	6	0.00%	99.85%
YEAR	→ QUAL + o + IPOINTS	1	8	0.00%	99.85%
ORG:CORP	→ NAME + o + STATE	1	14664	0.00%	99.85%
INDEX	→ CARDINAL + MEDIA + o	1	535	0.00%	99.85%
ORG:CORP	→ OCEAN + COUNTRY + o + CORP JARGON	1	14664	0.00%	99.85%
ORG:CORP	→ SUBURB + o + CORP JARGON	1	14664	0.00%	99.85%
ORG:CORP	→ CITY + o + OCEAN + CORP JARGON	1	14664	0.00%	99.85%
DURATION	→ o + DURATION + o + MONTH	1	4081	0.00%	99.85%
BOOK	→ PER + o + COUNTRY	1	49	0.00%	99.85%
ORG:EDU	→ REGION + RELIGION + o	1	330	0.00%	99.86%
DATE	→ ORDINAL + DURATION + o + DAY	1	14977	0.00%	99.86%
ORG:CORP	→ NAME + o + CORP JARGON + o + COUNTRY + o	1	14664	0.00%	99.86%
	+ ORG:CORP				
BOOK	→ CITY	1	49	0.00%	99.86%
TV SHOW	→ PER + o	1	67	0.00%	99.86%
CARDINAL	→ QUAL + PERCENT	1	10103	0.00%	99.86%
ORG:CORP	→ NAME + OCEAN + o	1	14664	0.00%	99.86%
DATE	→ MONTH + NUMDAY + o + NUMDAY + o + NUMDAY	1	14977	0.00%	99.86%
	+ o + NUMDAY + o + NUMDAY				
GOVERNMENT	→ CONTINENT + o	1	837	0.00%	99.86%
PER	→ o + NATIONALITY	1	14911	0.00%	99.87%
WOA	→ PER + o	1	64	0.00%	99.87%
FILM	→ o + NAME	1	21	0.00%	99.87%
DAY	→ YEAR + DURATION	1	14	0.00%	99.87%
DURATION	→ REL + DATE	1	4081	0.00%	99.87%
COUNTRY	→ PER	1	8	0.00%	99.87%
AGE	→ QUAL + o + CARDINAL + DURATION + o	1	438	0.00%	99.87%
DURATION	→ YEAR	1	4081	0.00%	99.87%
TIME	→ TIME + QUAL	1	98	0.00%	99.87%
MUSEUM	→ NATIONALITY + o	1	12	0.00%	99.87%
DATE	→ o + YEAR + o + YEAR + o + YEAR	1	14977	0.00%	99.88%
DATE	→ DATE + REL + o + DURATION	1	14977	0.00%	99.88%
ANIMATE	→ NAME + o	1	14	0.00%	99.88%
REL	→ MONEY + o	1	4	0.00%	99.88%
DURATION	→ CARDINAL + DATE	1	4081	0.00%	99.88%
FACILITY	→ OCEAN + o	1	67	0.00%	99.88%
DATE:OTHER	→ PER + DURATION	1	46	0.00%	99.88%
DATE	→ o + DURATION + o + MONTH + NUMDAY + o +	1	14977	0.00%	99.88%
	YEAR				

rule	children	count	of	% total	cumul've
ORG:CORP	→ o + CORP JARGON + o + ORG:CORP	1	14664	0.00%	99.88%
WEIGHT	→ WEIGHT + QUAL	1	273	0.00%	99.89%
ORG:CORP	→ NATIONALITY + ORG:CORP	1	14664	0.00%	99.89%
NAME	→ FIRST + NAME + NAME	1	2600	0.00%	99.89%
DATE	→ o + DURATION + o + DURATION + REL	1	14977	0.00%	99.89%
ORG:CORP	→ o + OCEAN + o + OCEAN + o	1	14664	0.00%	99.89%
ORG:CORP	→ CITY + CORP JARGON + CORP JARGON + o	1	14664	0.00%	99.89%
PERCENT	→ CARDINAL + o + CARDINAL	1	6510	0.00%	99.89%
ORG:CORP	→ NAME + o + CONTINENT + o + CORP JARGON	1	14664	0.00%	99.89%
CAPITAL	→ QUAL + CARDINAL	1	3	0.00%	99.89%
ORG:EDU	→ ORG:EDU + o + NAME + o	1	330	0.00%	99.90%
INDEX	→ CARDINAL	1	535	0.00%	99.90%
ORG:CORP	→ CITY + NAME + CORP JARGON + o	1	14664	0.00%	99.90%
HOSPITAL	→ REGION + o	1	22	0.00%	99.90%
NAME	→ MONEY + o + QUANTITY:3D	1	2600	0.00%	99.90%
TEMPERATURE	→ CARDINAL + o + CARDINAL	1	2	0.00%	99.90%
MONEY	→ RATE + MONEY	1	12580	0.00%	99.90%
DATE	→ REL + YEAR + DURATION	1	14977	0.00%	99.90%
NORP:OTHER	→ NATIONALITY + NATIONALITY	1	54	0.00%	99.90%
ROLE	→ ORG:CORP + PER	1	629	0.00%	99.91%
SPORTS EVENT	→ NAME + o	1	27	0.00%	99.91%
NAME	→ NATIONALITY + o	1	2600	0.00%	99.91%
DATE	→ DAY + REL + o + EVENT	1	14977	0.00%	99.91%
ORG:POLITICAL	→ STATE + NORP:POLITICAL + o	1	74	0.00%	99.91%
DATE	→ CARDINAL + DURATION + o	1	14977	0.00%	99.91%
FACILITY	→ GPE + o	1	67	0.00%	99.91%
GOVERNMENT	→ o + CONTINENT	1	837	0.00%	99.91%
RATE	→ CARDINAL + NATIONALITY + o + DURATION	1	2107	0.00%	99.91%
MONEY	→ CARDINAL + NATIONALITY + UNIT	1	12580	0.00%	99.91%
ORG:CORP	→ FIRST + o + NORP:OTHER + o + CORP JARGON	1	14664	0.00%	99.92%
ORG:CORP	→ o + ORDINAL + NAME + CORP JARGON	1	14664	0.00%	99.92%
POINTS	→ CARDINAL + IPOINTS	1	24	0.00%	99.92%
PERIODIC	→ PERIODIC + SEASON	1	175	0.00%	99.92%
LOCATION:OTHER	→ OCEAN + o	1	72	0.00%	99.92%
NAME	→ NAME + o + NAME + o + NAME + o + NAME + o + NAME + o + NAME + o + NAME + o + NAME	1	2600	0.00%	99.92%
PER	→ MONTH + FIRST + NAME	1	14911	0.00%	99.92%
ROLE	→ NATIONALITY + o + ROLE	1	629	0.00%	99.92%
DATE	→ REL + o + DATE + o + DATE + o	1	14977	0.00%	99.92%

rule	children	count	of	% total	cumul've
ORG:CORP	→ ORDINAL + DURATION + o	1	14664	0.00%	99.93%
ORG:RELIGIOUS	→ PER + o	1	25	0.00%	99.93%
ORG:CORP	→ STATE + o + COUNTRY + o	1	14664	0.00%	99.93%
HOTEL	→ LOCATION:OTHER	1	28	0.00%	99.93%
ATTRACTION	→ BRIDGE + o	1	11	0.00%	99.93%
ORG:CORP	→ ORDINAL + NATIONALITY + o + CORP JARGON	1	14664	0.00%	99.93%
DATE	→ MONTH + DURATION + o + YEAR	1	14977	0.00%	99.93%
BUILDING	→ REGION + o	1	55	0.00%	99.93%
ORDINAL	→ MONEY + o + UNIT	1	30	0.00%	99.93%
AGE	→ DURATION + REL	1	438	0.00%	99.94%
MONTH	→ CARDINAL + UNIT	1	29	0.00%	99.94%
ORG:CORP	→ ORDINAL + NORP:OTHER + o	1	14664	0.00%	99.94%
DATE:OTHER	→ QUAL + DURATION	1	46	0.00%	99.94%
MONEY	→ QUAL + CARDINAL + o + MONEY	1	12580	0.00%	99.94%
RATE	→ CARDINAL + UNIT	1	2107	0.00%	99.94%
ROLE	→ COUNTRY + ROLE	1	629	0.00%	99.94%
ORG:CORP	→ NORP:POLITICAL	1	14664	0.00%	99.94%
GOVERNMENT	→ ORG:POLITICAL + o	1	837	0.00%	99.94%
ORG:EDU	→ ORG:EDU + CITY	1	330	0.00%	99.94%
CONTINENT	→ REGION + o	1	3	0.00%	99.95%
ORG:CORP	→ o + ORDINAL + CITY + o	1	14664	0.00%	99.95%
COUNTRY	→ NAME	1	8	0.00%	99.95%
EVENT	→ o + DATE	1	148	0.00%	99.95%
DATE	→ CARDINAL + REL + DAY + DURATION	1	14977	0.00%	99.95%
ROLE	→ MEDIA + ROLE	1	629	0.00%	99.95%
ORG:CORP	→ o + CONTINENT + CORP JARGON	1	14664	0.00%	99.95%
HOSPITAL	→ SUBURB + o	1	22	0.00%	99.95%
IPOINTS	→ CARDINAL + COUNTRY	1	2221	0.00%	99.95%
ORG:CORP	→ NAME + NAME + o	1	14664	0.00%	99.96%
LAW	→ DATE + o	1	221	0.00%	99.96%
PLAY	→ o + CITY + o	1	5	0.00%	99.96%
BUILDING	→ CITY + o + CARDINAL	1	55	0.00%	99.96%
DATE	→ DAY + REL + o + DATE	1	14977	0.00%	99.96%
ORG:OTHER	→ o + NAME	1	316	0.00%	99.96%
SONG	→ PER + o	1	9	0.00%	99.96%
FACILITY	→ CITY + o + CARDINAL	1	67	0.00%	99.96%
PER	→ HON + FIRST + HON	1	14911	0.00%	99.96%
PERCENT	→ CARDINAL + UNIT + o + PERCENT + UNIT	1	6510	0.00%	99.97%
DURATION	→ o + DURATION + o	1	4081	0.00%	99.97%

rule	children	count	of	% total	cumul've
SEASON	→ NORP:OTHER + o	1	4	0.00%	99.97%
PAINTING	→ FIRST + o + FIRST	1	6	0.00%	99.97%
DATE	→ YEAR + o + ORDINAL + CARDINAL	1	14977	0.00%	99.97%
FILM	→ PER	1	21	0.00%	99.97%
ORG:CORP	→ NICKNAME + o + CORP JARGON	1	14664	0.00%	99.97%
ORG:CORP	→ o + NAME + CORP JARGON + o + COUNTRY	1	14664	0.00%	99.97%
DURATION	→ FIRST + o	1	4081	0.00%	99.97%
ORG:CORP	→ ORG:CORP + o + STATE	1	14664	0.00%	99.98%
DATE	→ EVENT + o	1	14977	0.00%	99.98%
DATE	→ REL + o + DURATION + o	1	14977	0.00%	99.98%
DATE	→ REL + SEASON + SEASON + DATE	1	14977	0.00%	99.98%
ORG:CORP	→ RELIGION + o + CORP JARGON	1	14664	0.00%	99.98%
ORG:CORP	→ NAME + o + CITY + o + CORP JARGON	1	14664	0.00%	99.98%
DURATION	→ o + YEAR + o + YEAR	1	4081	0.00%	99.98%
SPORTS EVENT	→ YEAR + CITY + o	1	27	0.00%	99.98%
DURATION	→ DURATION + YEAR + o + YEAR	1	4081	0.00%	99.98%
STADIUM	→ NORP:OTHER + o	1	13	0.00%	99.98%
DATE	→ QUAL + SEASON	1	14977	0.00%	99.99%
QUANTITY:2D	→ QUANTITY:2D + QUAL	1	54	0.00%	99.99%
ORG:CORP	→ NAME + o + CARDINAL + CORP JARGON	1	14664	0.00%	99.99%
ORG:CORP	→ NAME + CORP JARGON + o + COUNTRY	1	14664	0.00%	99.99%
ORG:CORP	→ ORG:CORP + o + NATIONALITY + o	1	14664	0.00%	99.99%
DATE:OTHER	→ DURATION + REL	1	46	0.00%	99.99%
GRP:ORG	→ MEDIA + CARDINAL	1	401	0.00%	99.99%
ORG:CORP	→ ORG:CORP + o + CORP JARGON + CORP JARGON	1	14664	0.00%	99.99%
DATE	→ DATE + o + DATE + o + DATE	1	14977	0.00%	99.99%
ORG:CORP	→ ORDINAL + o + CORP JARGON + o + STATE	1	14664	0.00%	100.00%
FILM	→ NAME + o	1	21	0.00%	100.00%
DURATION	→ UNIT	1	4081	0.00%	100.00%
TIME	→ ORDINAL + o	1	98	0.00%	100.00%
ORG:CORP	→ CITY + o + CORP JARGON + CORP JARGON	1	14664	0.00%	100.00%

16 Alphabetical Megannotation rules

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rule	children	count	of	type %	% total	cumul've
ADDRESS NON	→ CARDINAL + STREET	2	2	100.00	0.00%	0.00%
AGE	→ AGE + QUAL	9	438	2.05	0.01%	0.01%
AGE	→ AGE + o + AGE	6	438	1.37	0.01%	0.02%
AGE	→ AGE + o + QUAL	1	438	0.23	0.00%	0.02%
AGE	→ CARDINAL	228	438	52.05	0.25%	0.27%
AGE	→ CARDINAL + DURATION + o	93	438	21.23	0.10%	0.37%
AGE	→ CARDINAL + o	3	438	0.68	0.00%	0.37%
AGE	→ CARDINAL + o + AGE	1	438	0.23	0.00%	0.37%
AGE	→ CARDINAL + o + DURATION	1	438	0.23	0.00%	0.37%
AGE	→ DURATION	2	438	0.46	0.00%	0.37%
AGE	→ DURATION + REL	1	438	0.23	0.00%	0.37%
AGE	→ DURATION + o	32	438	7.31	0.03%	0.41%
AGE	→ QUAL + AGE	12	438	2.74	0.01%	0.42%
AGE	→ QUAL + CARDINAL	2	438	0.46	0.00%	0.42%
AGE	→ QUAL + CARDINAL + DURATION + o	3	438	0.68	0.00%	0.43%
AGE	→ QUAL + o + AGE	3	438	0.68	0.00%	0.43%
AGE	→ QUAL + o + AGE + o + AGE	1	438	0.23	0.00%	0.43%
AGE	→ QUAL + o + CARDINAL	1	438	0.23	0.00%	0.43%
AGE	→ QUAL + o + CARDINAL + DURATION + o	1	438	0.23	0.00%	0.43%
AGE	→ QUAL + o + LANGUAGE + o + LANGUAGE	1	438	0.23	0.00%	0.43%
AGE	→ o + AGE + o + AGE	1	438	0.23	0.00%	0.44%
AGE	→ o + CARDINAL	33	438	7.53	0.04%	0.47%
AGE	→ o + CARDINAL + QUAL	3	438	0.68	0.00%	0.47%
AIRPORT	→ CITY + o	6	28	21.43	0.01%	0.48%
AIRPORT	→ NAME	6	28	21.43	0.01%	0.49%
AIRPORT	→ NAME + o	14	28	50.00	0.02%	0.50%
AIRPORT	→ NAME + o + NAME + o	1	28	3.57	0.00%	0.50%
AIRPORT	→ SUBURB + o	1	28	3.57	0.00%	0.50%
ANIMATE	→ FIRST	3	14	21.43	0.00%	0.51%
ANIMATE	→ FIRST + NAME	4	14	28.57	0.00%	0.51%
ANIMATE	→ HON + NAME	1	14	7.14	0.00%	0.51%
ANIMATE	→ NAME	1	14	7.14	0.00%	0.51%
ANIMATE	→ NAME + o	1	14	7.14	0.00%	0.52%
ANIMATE	→ NAME + o + RIVER	1	14	7.14	0.00%	0.52%
ANIMATE	→ NICKNAME	1	14	7.14	0.00%	0.52%
ANIMATE	→ NORP:OTHER + o	1	14	7.14	0.00%	0.52%

rule	children	count	of	type %	% total	cumul've
ANIMATE	→ o + FIRST + o + NICKNAME + o + NAME + o	1	14	7.14	0.00%	0.52%
ARMY	→ ARMY + o	3	16	18.75	0.00%	0.52%
ARMY	→ COUNTRY + o	3	16	18.75	0.00%	0.53%
ARMY	→ NATIONALITY + o	7	16	43.75	0.01%	0.53%
ARMY	→ o + COUNTRY	1	16	6.25	0.00%	0.53%
ARMY	→ o + NATIONALITY	2	16	12.50	0.00%	0.54%
ATTRACTION	→ BRIDGE + o	1	11	9.09	0.00%	0.54%
ATTRACTION	→ CITY	2	11	18.18	0.00%	0.54%
ATTRACTION	→ CITY + o	1	11	9.09	0.00%	0.54%
ATTRACTION	→ LOCATION:OTHER	1	11	9.09	0.00%	0.54%
ATTRACTION	→ RIVER	2	11	18.18	0.00%	0.54%
ATTRACTION	→ o + NAME	4	11	36.36	0.00%	0.55%
AWARD	→ COUNTRY + o	3	14	21.43	0.00%	0.55%
AWARD	→ NAME	2	14	14.29	0.00%	0.55%
AWARD	→ NAME + o	6	14	42.86	0.01%	0.56%
AWARD	→ WOA + o	2	14	14.29	0.00%	0.56%
AWARD	→ o + DURATION	1	14	7.14	0.00%	0.56%
BAND	→ o + NATIONALITY + CARDINAL + o	1	1	100.00	0.00%	0.57%
BOOK	→ BOOK + CARDINAL	1	49	2.04	0.00%	0.57%
BOOK	→ CITY	1	49	2.04	0.00%	0.57%
BOOK	→ COUNTRY + o	1	49	2.04	0.00%	0.57%
BOOK	→ FIRST + NAME	1	49	2.04	0.00%	0.57%
BOOK	→ NAME	2	49	4.08	0.00%	0.57%
BOOK	→ NAME + o	2	49	4.08	0.00%	0.57%
BOOK	→ NATIONALITY + o	2	49	4.08	0.00%	0.58%
BOOK	→ NORP:OTHER + o	1	49	2.04	0.00%	0.58%
BOOK	→ PER	4	49	8.16	0.00%	0.58%
BOOK	→ PER + o + COUNTRY	1	49	2.04	0.00%	0.58%
BOOK	→ PER + o + PER + o	1	49	2.04	0.00%	0.58%
BOOK	→ YEAR	1	49	2.04	0.00%	0.58%
BOOK	→ o + CARDINAL + o	1	49	2.04	0.00%	0.59%
BOOK	→ o + CITY + o	2	49	4.08	0.00%	0.59%
BOOK	→ o + DURATION	2	49	4.08	0.00%	0.59%
BOOK	→ o + GOD	5	49	10.20	0.01%	0.60%
BOOK	→ o + GOD + o + PER	1	49	2.04	0.00%	0.60%
BOOK	→ o + GOVERNMENT	1	49	2.04	0.00%	0.60%
BOOK	→ o + GRP:PER	2	49	4.08	0.00%	0.60%
BOOK	→ o + NAME	3	49	6.12	0.00%	0.60%
BOOK	→ o + NAME + o	1	49	2.04	0.00%	0.60%

rule	children	count	of	type %	% total	cumul've
BOOK	→ o + NATIONALITY + o	4	49	8.16	0.00%	0.61%
BOOK	→ o + NORP:OTHER + o + COUNTRY + o	1	49	2.04	0.00%	0.61%
BOOK	→ o + ORG:EDU	1	49	2.04	0.00%	0.61%
BOOK	→ o + ORG:EDU + o	1	49	2.04	0.00%	0.61%
BOOK	→ o + ORG:POLITICAL + o	1	49	2.04	0.00%	0.61%
BOOK	→ o + PER	2	49	4.08	0.00%	0.61%
BOOK	→ o + PER + o + COUNTRY	1	49	2.04	0.00%	0.62%
BOOK	→ o + REGION	1	49	2.04	0.00%	0.62%
BOOK	→ o + REGION + o	1	49	2.04	0.00%	0.62%
BRIDGE	→ CITY + o	1	22	4.55	0.00%	0.62%
BRIDGE	→ GRP:LOC + o	1	22	4.55	0.00%	0.62%
BRIDGE	→ LOCATION:OTHER + o	13	22	59.09	0.01%	0.63%
BRIDGE	→ NAME + o	2	22	9.09	0.00%	0.64%
BRIDGE	→ REGION + o	4	22	18.18	0.00%	0.64%
BRIDGE	→ STREET + o	1	22	4.55	0.00%	0.64%
BUILDING	→ CITY + o	6	55	10.91	0.01%	0.65%
BUILDING	→ CITY + o + CARDINAL	1	55	1.82	0.00%	0.65%
BUILDING	→ GPE + o	2	55	3.64	0.00%	0.65%
BUILDING	→ NAME	7	55	12.73	0.01%	0.66%
BUILDING	→ NAME + o	21	55	38.18	0.02%	0.68%
BUILDING	→ ORG:CORP	4	55	7.27	0.00%	0.69%
BUILDING	→ ORG:CORP + o	10	55	18.18	0.01%	0.70%
BUILDING	→ REGION + o	1	55	1.82	0.00%	0.70%
BUILDING	→ o + CARDINAL	1	55	1.82	0.00%	0.70%
BUILDING	→ o + CITY	2	55	3.64	0.00%	0.70%
CAPITAL	→ CARDINAL + MULT	1	3	33.33	0.00%	0.70%
CAPITAL	→ CITY	1	3	33.33	0.00%	0.70%
CAPITAL	→ QUAL + CARDINAL	1	3	33.33	0.00%	0.70%
CARDINAL	→ CAPITAL + MULT	2	10103	0.02	0.00%	0.71%
CARDINAL	→ CARDINAL	4	10103	0.04	0.00%	0.71%
CARDINAL	→ CARDINAL + CARDINAL	1	10103	0.01	0.00%	0.71%
CARDINAL	→ CARDINAL + CARDINAL + MULT	1	10103	0.01	0.00%	0.71%
CARDINAL	→ CARDINAL + DURATION	3	10103	0.03	0.00%	0.72%
CARDINAL	→ CARDINAL + MULT	7470	10103	73.94	8.06%	8.77%
CARDINAL	→ CARDINAL + MULT + MULT	3	10103	0.03	0.00%	8.78%
CARDINAL	→ CARDINAL + QUAL	60	10103	0.59	0.06%	8.84%
CARDINAL	→ CARDINAL + UNIT	4	10103	0.04	0.00%	8.84%
CARDINAL	→ CARDINAL + o	3	10103	0.03	0.00%	8.85%
CARDINAL	→ CARDINAL + o + CARDINAL	284	10103	2.81	0.31%	9.15%

rule	children	count	of	type %	% total	cumul've
CARDINAL	→ CARDINAL + o + CARDINAL + MULT	1	10103	0.01	0.00%	9.16%
CARDINAL	→ CARDINAL + o + CARDINAL + o + CARDINAL +	1	10103	0.01	0.00%	9.16%
	o + CARDINAL					
CARDINAL	→ CARDINAL + o + FIRST	1	10103	0.01	0.00%	9.16%
CARDINAL	→ CARDINAL + o + MULT	5	10103	0.05	0.01%	9.16%
CARDINAL	→ CARDINAL + o + QUAL	3	10103	0.03	0.00%	9.17%
CARDINAL	→ DURATION + o + CARDINAL	1	10103	0.01	0.00%	9.17%
CARDINAL	→ FIRST + NAME	1	10103	0.01	0.00%	9.17%
CARDINAL	→ MONEY	1	10103	0.01	0.00%	9.17%
CARDINAL	→ MULT	224	10103	2.22	0.24%	9.41%
CARDINAL	→ MULT + QUAL	1	10103	0.01	0.00%	9.41%
CARDINAL	→ MULT + o	1	10103	0.01	0.00%	9.41%
CARDINAL	→ MULT + o + CARDINAL	2	10103	0.02	0.00%	9.42%
CARDINAL	→ ORDINAL + MULT	1	10103	0.01	0.00%	9.42%
CARDINAL	→ ORG:EDU + MULT	1	10103	0.01	0.00%	9.42%
CARDINAL	→ QUAL + ADDRESS NON	1	10103	0.01	0.00%	9.42%
CARDINAL	→ QUAL + CARDINAL	1939	10103	19.19	2.09%	11.51%
CARDINAL	→ QUAL + CARDINAL + MULT	4	10103	0.04	0.00%	11.51%
CARDINAL	→ QUAL + CARDINAL + o + CARDINAL	5	10103	0.05	0.01%	11.52%
CARDINAL	→ QUAL + NAME	2	10103	0.02	0.00%	11.52%
CARDINAL	→ QUAL + PERCENT	1	10103	0.01	0.00%	11.52%
CARDINAL	→ QUAL + QUAL + CARDINAL	3	10103	0.03	0.00%	11.53%
CARDINAL	→ QUAL + QUAL + o + CARDINAL	1	10103	0.01	0.00%	11.53%
CARDINAL	→ QUAL + o + CARDINAL	55	10103	0.54	0.06%	11.59%
CARDINAL	→ QUAL + o + CARDINAL + CARDINAL + MULT	1	10103	0.01	0.00%	11.59%
CARDINAL	→ QUAL + o + MULT	3	10103	0.03	0.00%	11.59%
CARDINAL	→ QUAL + o + ORDINAL	2	10103	0.02	0.00%	11.59%
CARDINAL	→ QUAL + o + QUAL + CARDINAL	1	10103	0.01	0.00%	11.59%
CARDINAL	→ REL + CARDINAL	2	10103	0.02	0.00%	11.60%
CARDINAL	→ UNIT + CARDINAL	3	10103	0.03	0.00%	11.60%
CARDINAL	→ o + MULT	1	10103	0.01	0.00%	11.60%
CITY	→ CITY + o + CITY	1	3	33.33	0.00%	11.60%
CITY	→ GPE + o + CARDINAL	1	3	33.33	0.00%	11.60%
CITY	→ HON + FIRST	1	3	33.33	0.00%	11.60%
CONTINENT	→ CARDINAL + o	1	3	33.33	0.00%	11.60%
CONTINENT	→ REGION + o	1	3	33.33	0.00%	11.61%
CONTINENT	→ o + COUNTRY	1	3	33.33	0.00%	11.61%
CORP JARGON	→ o + NATIONALITY + CORP JARGON	1	1	100.00	0.00%	11.61%
COUNTRY	→ NAME	1	8	12.50	0.00%	11.61%

rule	children	count	of	type %	% total	cumul've
COUNTRY	→ NAME + o	4	8	50.00	0.00%	11.61%
COUNTRY	→ NATIONALITY + o	1	8	12.50	0.00%	11.61%
COUNTRY	→ PER	1	8	12.50	0.00%	11.62%
COUNTRY	→ o + GPE + o + COUNTRY	1	8	12.50	0.00%	11.62%
DATE:OTHER	→ CARDINAL + DURATION	1	43	2.33	0.00%	11.62%
DATE:OTHER	→ CARDINAL + REL + o + DATE:OTHER	1	43	2.33	0.00%	11.62%
DATE:OTHER	→ DURATION + CARDINAL	1	43	2.33	0.00%	11.62%
DATE:OTHER	→ DURATION + REL	1	43	2.33	0.00%	11.62%
DATE:OTHER	→ ORDINAL + DURATION	1	43	2.33	0.00%	11.62%
DATE:OTHER	→ ORDINAL + o + DURATION	1	43	2.33	0.00%	11.62%
DATE:OTHER	→ PER + DURATION	1	43	2.33	0.00%	11.62%
DATE:OTHER	→ QUAL + DURATION	1	43	2.33	0.00%	11.63%
DATE:OTHER	→ REL + DURATION	8	43	18.60	0.01%	11.63%
DATE:OTHER	→ REL + DURATION + DURATION	1	43	2.33	0.00%	11.63%
DATE:OTHER	→ REL + EVENT	1	43	2.33	0.00%	11.64%
DATE:OTHER	→ REL + o	2	43	4.65	0.00%	11.64%
DATE:OTHER	→ REL + o + DURATION	1	43	2.33	0.00%	11.64%
DATE:OTHER	→ TIME + o + DURATION	1	43	2.33	0.00%	11.64%
DATE:OTHER	→ o + DATE	1	43	2.33	0.00%	11.64%
DATE:OTHER	→ o + DURATION	20	43	46.51	0.02%	11.66%
DATE	→ CARDINAL	24	14980	0.16	0.03%	11.69%
DATE	→ CARDINAL + DATE	1	14980	0.01	0.00%	11.69%
DATE	→ CARDINAL + DATE + DURATION	1	14980	0.01	0.00%	11.69%
DATE	→ CARDINAL + DATE + REL	1	14980	0.01	0.00%	11.69%
DATE	→ CARDINAL + DURATION	75	14980	0.50	0.08%	11.77%
DATE	→ CARDINAL + DURATION + DATE	2	14980	0.01	0.00%	11.77%
DATE	→ CARDINAL + DURATION + REL	17	14980	0.11	0.02%	11.79%
DATE	→ CARDINAL + DURATION + o	1	14980	0.01	0.00%	11.79%
DATE	→ CARDINAL + DURATION + o + MONTH	1	14980	0.01	0.00%	11.80%
DATE	→ CARDINAL + DURATION + o + YEAR	1	14980	0.01	0.00%	11.80%
DATE	→ CARDINAL + REL	1	14980	0.01	0.00%	11.80%
DATE	→ CARDINAL + REL + DAY + DURATION	1	14980	0.01	0.00%	11.80%
DATE	→ CARDINAL + REL + DURATION	5	14980	0.03	0.01%	11.80%
DATE	→ CARDINAL + o	2	14980	0.01	0.00%	11.81%
DATE	→ CARDINAL + o + DURATION	7	14980	0.05	0.01%	11.81%
DATE	→ CARDINAL + o + REL + CARDINAL + DURATION	1	14980	0.01	0.00%	11.81%
DATE	→ CITY	1	14980	0.01	0.00%	11.82%
DATE	→ DATE + DATE	3	14980	0.02	0.00%	11.82%
DATE	→ DATE + DURATION	83	14980	0.55	0.09%	11.91%

rule	children	count	of	type %	% total	cumul've
DATE	→ DATE + ORDINAL + DURATION	7	14980	0.05	0.01%	11.92%
DATE	→ DATE + QUAL	11	14980	0.07	0.01%	11.93%
DATE	→ DATE + REL	2	14980	0.01	0.00%	11.93%
DATE	→ DATE + REL + SEASON	1	14980	0.01	0.00%	11.93%
DATE	→ DATE + REL + o + DURATION	1	14980	0.01	0.00%	11.93%
DATE	→ DATE + o	2	14980	0.01	0.00%	11.93%
DATE	→ DATE + o + DATE	52	14980	0.35	0.06%	11.99%
DATE	→ DATE + o + DATE + o + DATE	1	14980	0.01	0.00%	11.99%
DATE	→ DATE + o + DURATION	10	14980	0.07	0.01%	12.00%
DATE	→ DATE + o + DURATION + o	1	14980	0.01	0.00%	12.00%
DATE	→ DATE + o + EVENT	1	14980	0.01	0.00%	12.00%
DATE	→ DATE + o + MONTH	1	14980	0.01	0.00%	12.01%
DATE	→ DATE + o + MONTH + NUMDAY	2	14980	0.01	0.00%	12.01%
DATE	→ DATE + o + ORDINAL + DURATION	23	14980	0.15	0.02%	12.03%
DATE	→ DATE + o + REL	1	14980	0.01	0.00%	12.03%
DATE	→ DATE + o + YEAR	5	14980	0.03	0.01%	12.04%
DATE	→ DAY	1144	14980	7.64	1.23%	13.27%
DATE	→ DAY + DURATION	72	14980	0.48	0.08%	13.35%
DATE	→ DAY + MONTH + NUMDAY	2	14980	0.01	0.00%	13.35%
DATE	→ DAY + MONTH + NUMDAY + o + YEAR	3	14980	0.02	0.00%	13.36%
DATE	→ DAY + NUMDAY	1	14980	0.01	0.00%	13.36%
DATE	→ DAY + REL + EVENT	2	14980	0.01	0.00%	13.36%
DATE	→ DAY + REL + o + DATE	1	14980	0.01	0.00%	13.36%
DATE	→ DAY + REL + o + EVENT	1	14980	0.01	0.00%	13.36%
DATE	→ DAY + TIME	1	14980	0.01	0.00%	13.36%
DATE	→ DAY + o	2	14980	0.01	0.00%	13.36%
DATE	→ DAY + o + DATE	1	14980	0.01	0.00%	13.37%
DATE	→ DAY + o + DATE + o + YEAR	1	14980	0.01	0.00%	13.37%
DATE	→ DAY + o + DAY + o + MONTH + NUMDAY + o + NUMDAY	1	14980	0.01	0.00%	13.37%
DATE	→ DAY + o + MONTH + NUMDAY	15	14980	0.10	0.02%	13.38%
DATE	→ DAY + o + MONTH + NUMDAY + o + YEAR	29	14980	0.19	0.03%	13.42%
DATE	→ DAY + o + NUMDAY	12	14980	0.08	0.01%	13.43%
DATE	→ DAY + o + ORDINAL	2	14980	0.01	0.00%	13.43%
DATE	→ DURATION	507	14980	3.38	0.55%	13.98%
DATE	→ DURATION + CARDINAL + o + CARDINAL	1	14980	0.01	0.00%	13.98%
DATE	→ DURATION + DATE	20	14980	0.13	0.02%	14.00%
DATE	→ DURATION + DAY	7	14980	0.05	0.01%	14.01%
DATE	→ DURATION + DURATION + DATE	1	14980	0.01	0.00%	14.01%

rule	children	count	of	type %	% total	cumul've
DATE	→ DURATION + REL	1070	14980	7.14	1.15%	15.16%
DATE	→ DURATION + REL + DATE	10	14980	0.07	0.01%	15.17%
DATE	→ DURATION + REL + DATE + o + IPOINTS + o	1	14980	0.01	0.00%	15.17%
DATE	→ DURATION + REL + DAY	1	14980	0.01	0.00%	15.18%
DATE	→ DURATION + REL + EVENT	3	14980	0.02	0.00%	15.18%
DATE	→ DURATION + REL + EVENT + o + DATE	1	14980	0.01	0.00%	15.18%
DATE	→ DURATION + REL + LAW + o + YEAR	1	14980	0.01	0.00%	15.18%
DATE	→ DURATION + REL + o + DATE	6	14980	0.04	0.01%	15.19%
DATE	→ DURATION + REL + o + EVENT	1	14980	0.01	0.00%	15.19%
DATE	→ DURATION + REL + o + TIME + o	1	14980	0.01	0.00%	15.19%
DATE	→ DURATION + YEAR	4	14980	0.03	0.00%	15.19%
DATE	→ DURATION + o	7	14980	0.05	0.01%	15.20%
DATE	→ DURATION + o + CITY + DAY	1	14980	0.01	0.00%	15.20%
DATE	→ DURATION + o + DATE	107	14980	0.71	0.12%	15.32%
DATE	→ DURATION + o + DATE + o + DATE	1	14980	0.01	0.00%	15.32%
DATE	→ DURATION + o + DATE + o + YEAR	1	14980	0.01	0.00%	15.32%
DATE	→ DURATION + o + DAY	13	14980	0.09	0.01%	15.33%
DATE	→ DURATION + o + DURATION	2	14980	0.01	0.00%	15.34%
DATE	→ DURATION + o + DURATION + REL	1	14980	0.01	0.00%	15.34%
DATE	→ DURATION + o + DURATION + o + DURATION	1	14980	0.01	0.00%	15.34%
DATE	→ DURATION + o + DURATION + o + MONTH + NUMDAY	1	14980	0.01	0.00%	15.34%
DATE	→ DURATION + o + MONTH	7	14980	0.05	0.01%	15.35%
DATE	→ DURATION + o + MONTH + NUMDAY	23	14980	0.15	0.02%	15.37%
DATE	→ DURATION + o + MONTH + NUMDAY + o + YEAR	7	14980	0.05	0.01%	15.38%
DATE	→ DURATION + o + REL	15	14980	0.10	0.02%	15.40%
DATE	→ DURATION + o + REL + DATE	1	14980	0.01	0.00%	15.40%
DATE	→ DURATION + o + REL + DAY	2	14980	0.01	0.00%	15.40%
DATE	→ DURATION + o + SPORTS SEASON	1	14980	0.01	0.00%	15.40%
DATE	→ DURATION + o + WAR	1	14980	0.01	0.00%	15.40%
DATE	→ DURATION + o + YEAR	14	14980	0.09	0.02%	15.42%
DATE	→ DURATION + o + YEAR + o + YEAR	1	14980	0.01	0.00%	15.42%
DATE	→ EVENT	117	14980	0.78	0.13%	15.54%
DATE	→ EVENT + DURATION	2	14980	0.01	0.00%	15.55%
DATE	→ EVENT + YEAR	1	14980	0.01	0.00%	15.55%
DATE	→ EVENT + o	1	14980	0.01	0.00%	15.55%
DATE	→ EVENT + o + DATE	1	14980	0.01	0.00%	15.55%
DATE	→ EVENT + o + YEAR	1	14980	0.01	0.00%	15.55%
DATE	→ FIRST + DAY	1	14980	0.01	0.00%	15.55%

rule	children	count	of	type %	% total	cumul've
DATE	→ FIRST + DURATION	1	14980	0.01	0.00%	15.55%
DATE	→ LAW	1	14980	0.01	0.00%	15.55%
DATE	→ MONEY + o + DURATION	1	14980	0.01	0.00%	15.55%
DATE	→ MONEY + o + WEIGHT	1	14980	0.01	0.00%	15.56%
DATE	→ MONTH	1281	14980	8.55	1.38%	16.94%
DATE	→ MONTH + CARDINAL	9	14980	0.06	0.01%	16.95%
DATE	→ MONTH + CARDINAL + o + CARDINAL	1	14980	0.01	0.00%	16.95%
DATE	→ MONTH + DATE	4	14980	0.03	0.00%	16.95%
DATE	→ MONTH + DURATION	6	14980	0.04	0.01%	16.96%
DATE	→ MONTH + DURATION + o + YEAR	1	14980	0.01	0.00%	16.96%
DATE	→ MONTH + NUMDAY	953	14980	6.36	1.03%	17.99%
DATE	→ MONTH + NUMDAY + DATE	3	14980	0.02	0.00%	17.99%
DATE	→ MONTH + NUMDAY + YEAR	1	14980	0.01	0.00%	17.99%
DATE	→ MONTH + NUMDAY + o + CARDINAL	3	14980	0.02	0.00%	17.99%
DATE	→ MONTH + NUMDAY + o + DATE	2	14980	0.01	0.00%	18.00%
DATE	→ MONTH + NUMDAY + o + MONTH + NUMDAY + o + YEAR	2	14980	0.01	0.00%	18.00%
DATE	→ MONTH + NUMDAY + o + NUMDAY + o + NUMDAY + o + NUMDAY	1	14980	0.01	0.00%	18.00%
DATE	→ MONTH + NUMDAY + o + NUMDAY + o + NUMDAY + o + NUMDAY + o + NUMDAY	1	14980	0.01	0.00%	18.00%
DATE	→ MONTH + NUMDAY + o + YEAR	344	14980	2.30	0.37%	18.37%
DATE	→ MONTH + NUMDAY + o + YEAR + o + MONTH + NUMDAY + o + YEAR	3	14980	0.02	0.00%	18.38%
DATE	→ MONTH + YEAR	314	14980	2.10	0.34%	18.71%
DATE	→ MONTH + o	2	14980	0.01	0.00%	18.72%
DATE	→ MONTH + o + DATE	8	14980	0.05	0.01%	18.72%
DATE	→ MONTH + o + MONTH	2	14980	0.01	0.00%	18.73%
DATE	→ MONTH + o + MONTH + YEAR	1	14980	0.01	0.00%	18.73%
DATE	→ MONTH + o + MONTH + o + YEAR	1	14980	0.01	0.00%	18.73%
DATE	→ MONTH + o + NUMDAY	1	14980	0.01	0.00%	18.73%
DATE	→ MONTH + o + NUMDAY + o + YEAR	1	14980	0.01	0.00%	18.73%
DATE	→ MONTH + o + REL + DURATION	2	14980	0.01	0.00%	18.73%
DATE	→ MONTH + o + YEAR	1	14980	0.01	0.00%	18.73%
DATE	→ NORP:OTHER + o + DURATION	1	14980	0.01	0.00%	18.74%
DATE	→ NUMDAY	2	14980	0.01	0.00%	18.74%
DATE	→ NUMDAY + o + MONTH	1	14980	0.01	0.00%	18.74%
DATE	→ ORDINAL	6	14980	0.04	0.01%	18.75%

rule	children	count	of	type %	% total	cumul've
DATE	→ ORDINAL + CARDINAL	1	14980	0.01	0.00%	18.75%
DATE	→ ORDINAL + CARDINAL + DATE	6	14980	0.04	0.01%	18.75%
DATE	→ ORDINAL + CARDINAL + DURATION	25	14980	0.17	0.03%	18.78%
DATE	→ ORDINAL + CARDINAL + DURATION + DATE	1	14980	0.01	0.00%	18.78%
DATE	→ ORDINAL + CARDINAL + DURATION + o + DATE	19	14980	0.13	0.02%	18.80%
DATE	→ ORDINAL + CARDINAL + DURATION + o + DURATION	2	14980	0.01	0.00%	18.80%
DATE	→ ORDINAL + CARDINAL + DURATION + o + YEAR	12	14980	0.08	0.01%	18.82%
DATE	→ ORDINAL + CARDINAL + o + DATE	2	14980	0.01	0.00%	18.82%
DATE	→ ORDINAL + CARDINAL + o + MONTH + NUMDAY	1	14980	0.01	0.00%	18.82%
DATE	+ o + YEAR					
DATE	→ ORDINAL + CARDINAL + o + YEAR	3	14980	0.02	0.00%	18.82%
DATE	→ ORDINAL + DATE	1	14980	0.01	0.00%	18.82%
DATE	→ ORDINAL + DURATION	509	14980	3.40	0.55%	19.37%
DATE	→ ORDINAL + DURATION + DATE	7	14980	0.05	0.01%	19.38%
DATE	→ ORDINAL + DURATION + REL + DATE	2	14980	0.01	0.00%	19.38%
DATE	→ ORDINAL + DURATION + REL + o + DATE	3	14980	0.02	0.00%	19.39%
DATE	→ ORDINAL + DURATION + o	11	14980	0.07	0.01%	19.40%
DATE	→ ORDINAL + DURATION + o + DATE	80	14980	0.53	0.09%	19.48%
DATE	→ ORDINAL + DURATION + o + DATE + o + MONTH	1	14980	0.01	0.00%	19.49%
DATE	→ ORDINAL + DURATION + o + DAY	1	14980	0.01	0.00%	19.49%
DATE	→ ORDINAL + DURATION + o + DAY + o	1	14980	0.01	0.00%	19.49%
DATE	→ ORDINAL + DURATION + o + DURATION	5	14980	0.03	0.01%	19.49%
DATE	→ ORDINAL + DURATION + o + MONTH	2	14980	0.01	0.00%	19.49%
DATE	→ ORDINAL + DURATION + o + MONTH + NUMDAY	5	14980	0.03	0.01%	19.50%
DATE	→ ORDINAL + DURATION + o + REL + o + DURATION	1	14980	0.01	0.00%	19.50%
DATE	→ ORDINAL + DURATION + o + YEAR	41	14980	0.27	0.04%	19.55%
DATE	→ ORDINAL + ORDINAL + DURATION	1	14980	0.01	0.00%	19.55%
DATE	→ ORDINAL + REL + DURATION	1	14980	0.01	0.00%	19.55%
DATE	→ ORDINAL + o + DATE	1	14980	0.01	0.00%	19.55%
DATE	→ ORDINAL + o + DURATION	21	14980	0.14	0.02%	19.57%
DATE	→ PER + DURATION	4	14980	0.03	0.00%	19.58%
DATE	→ PERCENT + o + DURATION	2	14980	0.01	0.00%	19.58%
DATE	→ PERIODIC + DURATION	1	14980	0.01	0.00%	19.58%
DATE	→ PERIODIC + REL	1	14980	0.01	0.00%	19.58%
DATE	→ PERIODIC + o + DATE	1	14980	0.01	0.00%	19.58%
DATE	→ QUAL + CARDINAL + DURATION	2	14980	0.01	0.00%	19.58%

rule	children	count	of	type %	% total	cumul've
DATE	→ QUAL + DATE	37	14980	0.25	0.04%	19.62%
DATE	→ QUAL + DATE + o + MONTH	1	14980	0.01	0.00%	19.62%
DATE	→ QUAL + DAY	1	14980	0.01	0.00%	19.63%
DATE	→ QUAL + DURATION	19	14980	0.13	0.02%	19.65%
DATE	→ QUAL + MONTH	2	14980	0.01	0.00%	19.65%
DATE	→ QUAL + MONTH + o + MONTH	1	14980	0.01	0.00%	19.65%
DATE	→ QUAL + SEASON	1	14980	0.01	0.00%	19.65%
DATE	→ QUAL + YEAR	8	14980	0.05	0.01%	19.66%
DATE	→ QUAL + o + DATE	13	14980	0.09	0.01%	19.67%
DATE	→ QUAL + o + DURATION	11	14980	0.07	0.01%	19.68%
DATE	→ QUAL + o + DURATION + REL	2	14980	0.01	0.00%	19.69%
DATE	→ RATE + DURATION	1	14980	0.01	0.00%	19.69%
DATE	→ REL	13	14980	0.09	0.01%	19.70%
DATE	→ REL + CARDINAL	3	14980	0.02	0.00%	19.71%
DATE	→ REL + CARDINAL + DURATION	29	14980	0.19	0.03%	19.74%
DATE	→ REL + CARDINAL + EVENT	2	14980	0.01	0.00%	19.74%
DATE	→ REL + CARDINAL + o + DURATION	1	14980	0.01	0.00%	19.74%
DATE	→ REL + DATE	499	14980	3.33	0.54%	20.28%
DATE	→ REL + DATE + DURATION	2	14980	0.01	0.00%	20.28%
DATE	→ REL + DATE + o + DATE	1	14980	0.01	0.00%	20.28%
DATE	→ REL + DAY	181	14980	1.21	0.20%	20.48%
DATE	→ REL + DAY + DURATION	4	14980	0.03	0.00%	20.48%
DATE	→ REL + DURATION	3264	14980	21.79	3.52%	24.00%
DATE	→ REL + DURATION + DATE	10	14980	0.07	0.01%	24.01%
DATE	→ REL + DURATION + DAY	11	14980	0.07	0.01%	24.02%
DATE	→ REL + DURATION + DAY + o + ORG:CORP	1	14980	0.01	0.00%	24.02%
DATE	→ REL + DURATION + DURATION	1	14980	0.01	0.00%	24.03%
DATE	→ REL + DURATION + QUAL	1	14980	0.01	0.00%	24.03%
DATE	→ REL + DURATION + o	1	14980	0.01	0.00%	24.03%
DATE	→ REL + DURATION + o + DATE	5	14980	0.03	0.01%	24.03%
DATE	→ REL + DURATION + o + REL	1	14980	0.01	0.00%	24.03%
DATE	→ REL + DURATION + o + TIME	1	14980	0.01	0.00%	24.04%
DATE	→ REL + DURATION + o + YEAR	2	14980	0.01	0.00%	24.04%
DATE	→ REL + EVENT	2	14980	0.01	0.00%	24.04%
DATE	→ REL + MONTH	208	14980	1.39	0.22%	24.26%
DATE	→ REL + MONTH + NUMDAY	8	14980	0.05	0.01%	24.27%
DATE	→ REL + NUMDAY + DURATION	1	14980	0.01	0.00%	24.27%
DATE	→ REL + ORDINAL + DURATION	4	14980	0.03	0.00%	24.28%
DATE	→ REL + PERIODIC	3	14980	0.02	0.00%	24.28%

rule	children	count	of	type %	% total	cumul've
DATE	→ REL + PRODUCT:DRUG	1	14980	0.01	0.00%	24.28%
DATE	→ REL + REL + DAY	1	14980	0.01	0.00%	24.28%
DATE	→ REL + REL + DURATION	14	14980	0.09	0.02%	24.30%
DATE	→ REL + REL + MONTH	1	14980	0.01	0.00%	24.30%
DATE	→ REL + SEASON	180	14980	1.20	0.19%	24.49%
DATE	→ REL + SEASON + SEASON + DATE	1	14980	0.01	0.00%	24.49%
DATE	→ REL + SPORTS SEASON	1	14980	0.01	0.00%	24.50%
DATE	→ REL + TIME	1	14980	0.01	0.00%	24.50%
DATE	→ REL + YEAR	54	14980	0.36	0.06%	24.56%
DATE	→ REL + YEAR + DURATION	1	14980	0.01	0.00%	24.56%
DATE	→ REL + o	2	14980	0.01	0.00%	24.56%
DATE	→ REL + o + DATE	96	14980	0.64	0.10%	24.66%
DATE	→ REL + o + DATE + o + DATE	1	14980	0.01	0.00%	24.66%
DATE	→ REL + o + DATE + o + DATE + o	1	14980	0.01	0.00%	24.66%
DATE	→ REL + o + DAY	2	14980	0.01	0.00%	24.67%
DATE	→ REL + o + DAY + o + DURATION	1	14980	0.01	0.00%	24.67%
DATE	→ REL + o + DURATION	143	14980	0.95	0.15%	24.82%
DATE	→ REL + o + DURATION + DATE	3	14980	0.02	0.00%	24.82%
DATE	→ REL + o + DURATION + QUAL	1	14980	0.01	0.00%	24.83%
DATE	→ REL + o + DURATION + o	1	14980	0.01	0.00%	24.83%
DATE	→ REL + o + DURATION + o + DATE	4	14980	0.03	0.00%	24.83%
DATE	→ REL + o + DURATION + o + MONTH + NUMDAY	1	14980	0.01	0.00%	24.83%
	+ o + YEAR					
DATE	→ REL + o + MONTH	34	14980	0.23	0.04%	24.87%
DATE	→ REL + o + MONTH + o	1	14980	0.01	0.00%	24.87%
DATE	→ REL + o + ORDINAL + DURATION	5	14980	0.03	0.01%	24.88%
DATE	→ REL + o + QUAL + MONTH	1	14980	0.01	0.00%	24.88%
DATE	→ REL + o + REL + DURATION	2	14980	0.01	0.00%	24.88%
DATE	→ REL + o + REL + o + DURATION	1	14980	0.01	0.00%	24.88%
DATE	→ REL + o + REL + o + YEAR	1	14980	0.01	0.00%	24.88%
DATE	→ REL + o + WAR	1	14980	0.01	0.00%	24.88%
DATE	→ REL + o + YEAR	34	14980	0.23	0.04%	24.92%
DATE	→ REL + o + YEAR + DURATION	1	14980	0.01	0.00%	24.92%
DATE	→ SEASON	63	14980	0.42	0.07%	24.99%
DATE	→ SEASON + DATE	1	14980	0.01	0.00%	24.99%
DATE	→ SEASON + DURATION	4	14980	0.03	0.00%	24.99%
DATE	→ SEASON + YEAR	7	14980	0.05	0.01%	25.00%
DATE	→ SEASON + o	4	14980	0.03	0.00%	25.00%
DATE	→ SEASON + o + DATE	2	14980	0.01	0.00%	25.01%

rule	children	count	of	type %	% total	cumul've
DATE	→ SEASON + o + REL	1	14980	0.01	0.00%	25.01%
DATE	→ SEASON + o + YEAR	8	14980	0.05	0.01%	25.02%
DATE	→ TIME	3	14980	0.02	0.00%	25.02%
DATE	→ TIME + DATE	16	14980	0.11	0.02%	25.04%
DATE	→ TIME + DAY	9	14980	0.06	0.01%	25.05%
DATE	→ TIME + MONTH + NUMDAY	1	14980	0.01	0.00%	25.05%
DATE	→ TIME + o + DATE	2	14980	0.01	0.00%	25.05%
DATE	→ TIME + o + REL + DURATION	1	14980	0.01	0.00%	25.05%
DATE	→ UNIT + o + MONTH + NUMDAY	1	14980	0.01	0.00%	25.05%
DATE	→ WAR	2	14980	0.01	0.00%	25.05%
DATE	→ YEAR	2190	14980	14.62	2.36%	27.42%
DATE	→ YEAR + DATE	6	14980	0.04	0.01%	27.42%
DATE	→ YEAR + DATE + DURATION	1	14980	0.01	0.00%	27.42%
DATE	→ YEAR + DATE + o + DATE	1	14980	0.01	0.00%	27.42%
DATE	→ YEAR + DURATION	17	14980	0.11	0.02%	27.44%
DATE	→ YEAR + EVENT	3	14980	0.02	0.00%	27.45%
DATE	→ YEAR + MONTH	1	14980	0.01	0.00%	27.45%
DATE	→ YEAR + ORDINAL + CARDINAL	1	14980	0.01	0.00%	27.45%
DATE	→ YEAR + ORDINAL + DURATION	17	14980	0.11	0.02%	27.47%
DATE	→ YEAR + SEASON	1	14980	0.01	0.00%	27.47%
DATE	→ YEAR + o	1	14980	0.01	0.00%	27.47%
DATE	→ YEAR + o + DATE	4	14980	0.03	0.00%	27.47%
DATE	→ YEAR + o + DURATION	9	14980	0.06	0.01%	27.48%
DATE	→ YEAR + o + ORDINAL + CARDINAL	1	14980	0.01	0.00%	27.48%
DATE	→ YEAR + o + ORDINAL + CARDINAL + DURATION	2	14980	0.01	0.00%	27.49%
DATE	→ YEAR + o + ORDINAL + DURATION	5	14980	0.03	0.01%	27.49%
DATE	→ YEAR + o + REL	1	14980	0.01	0.00%	27.49%
DATE	→ YEAR + o + YEAR	19	14980	0.13	0.02%	27.51%
DATE	→ o + CARDINAL	1	14980	0.01	0.00%	27.51%
DATE	→ o + CORP JARGON + DURATION	1	14980	0.01	0.00%	27.52%
DATE	→ o + DATE	6	14980	0.04	0.01%	27.52%
DATE	→ o + DATE + o + DATE	4	14980	0.03	0.00%	27.53%
DATE	→ o + DATE + o + DATE + o + YEAR	2	14980	0.01	0.00%	27.53%
DATE	→ o + DATE + o + MONTH	1	14980	0.01	0.00%	27.53%
DATE	→ o + DAY	4	14980	0.03	0.00%	27.53%
DATE	→ o + DAY + o + NUMDAY + REL + DURATION	1	14980	0.01	0.00%	27.53%
DATE	→ o + DURATION	55	14980	0.37	0.06%	27.59%
DATE	→ o + DURATION + DATE	2	14980	0.01	0.00%	27.60%
DATE	→ o + DURATION + DURATION + o + DATE	1	14980	0.01	0.00%	27.60%

rule	children	count	of	type %	% total	cumul've
DATE	→ o + DURATION + REL	2	14980	0.01	0.00%	27.60%
DATE	→ o + DURATION + REL + DATE	3	14980	0.02	0.00%	27.60%
DATE	→ o + DURATION + o + DATE	24	14980	0.16	0.03%	27.63%
DATE	→ o + DURATION + o + DURATION + REL	1	14980	0.01	0.00%	27.63%
DATE	→ o + DURATION + o + MONTH + NUMDAY	7	14980	0.05	0.01%	27.64%
DATE	→ o + DURATION + o + MONTH + NUMDAY + o + YEAR	1	14980	0.01	0.00%	27.64%
DATE	→ o + DURATION + o + REL + o + DURATION + o + DATE	1	14980	0.01	0.00%	27.64%
DATE	→ o + DURATION + o + YEAR	4	14980	0.03	0.00%	27.64%
DATE	→ o + DURATION + o + YEAR + o + YEAR	1	14980	0.01	0.00%	27.65%
DATE	→ o + MONTH	3	14980	0.02	0.00%	27.65%
DATE	→ o + NUMDAY	1	14980	0.01	0.00%	27.65%
DATE	→ o + NUMDAY + DURATION	1	14980	0.01	0.00%	27.65%
DATE	→ o + ORDINAL + DURATION	20	14980	0.13	0.02%	27.67%
DATE	→ o + ORDINAL + DURATION + o + DATE	13	14980	0.09	0.01%	27.69%
DATE	→ o + ORDINAL + DURATION + o + MONTH + NUMDAY	1	14980	0.01	0.00%	27.69%
DATE	→ o + REL + DATE	2	14980	0.01	0.00%	27.69%
DATE	→ o + WAR	1	14980	0.01	0.00%	27.69%
DATE	→ o + YEAR	111	14980	0.74	0.12%	27.81%
DATE	→ o + YEAR + DATE	1	14980	0.01	0.00%	27.81%
DATE	→ o + YEAR + ORDINAL + DURATION	1	14980	0.01	0.00%	27.81%
DATE	→ o + YEAR + o + DATE	1	14980	0.01	0.00%	27.81%
DATE	→ o + YEAR + o + MONTH + NUMDAY	1	14980	0.01	0.00%	27.81%
DATE	→ o + YEAR + o + YEAR	3	14980	0.02	0.00%	27.82%
DATE	→ o + YEAR + o + YEAR + o + YEAR	1	14980	0.01	0.00%	27.82%
DAY	→ DAY + o + DAY	2	14	14.29	0.00%	27.82%
DAY	→ DURATION + REL	1	14	7.14	0.00%	27.82%
DAY	→ ORDINAL + DURATION	2	14	14.29	0.00%	27.82%
DAY	→ ORDINAL + DURATION + o + DATE	2	14	14.29	0.00%	27.83%
DAY	→ REL + DAY	1	14	7.14	0.00%	27.83%
DAY	→ REL + DURATION	3	14	21.43	0.00%	27.83%
DAY	→ REL + o + DATE	1	14	7.14	0.00%	27.83%
DAY	→ SEASON	1	14	7.14	0.00%	27.83%
DAY	→ YEAR + DURATION	1	14	7.14	0.00%	27.83%
DISEASE	→ NAME + o	8	8	100.00	0.01%	27.84%
DURATION	→ CAPITAL + DURATION	1	4081	0.02	0.00%	27.84%

rule	children	count	of	type %	% total	cumul've
DURATION	→ CARDINAL	1068	4081	26.17	1.15%	29.00%
DURATION	→ CARDINAL + CARDINAL + DURATION	1	4081	0.02	0.00%	29.00%
DURATION	→ CARDINAL + DATE	1	4081	0.02	0.00%	29.00%
DURATION	→ CARDINAL + DURATION	2532	4081	62.04	2.73%	31.73%
DURATION	→ CARDINAL + DURATION + QUAL	1	4081	0.02	0.00%	31.73%
DURATION	→ CARDINAL + DURATION + REL	2	4081	0.05	0.00%	31.73%
DURATION	→ CARDINAL + DURATION + o	2	4081	0.05	0.00%	31.73%
DURATION	→ CARDINAL + DURATION + o + CARDINAL + DU- RATION	1	4081	0.02	0.00%	31.73%
DURATION	→ CARDINAL + GOVERNMENT + DURATION	1	4081	0.02	0.00%	31.74%
DURATION	→ CARDINAL + MULT + DURATION + REL	1	4081	0.02	0.00%	31.74%
DURATION	→ CARDINAL + PERIODIC	1	4081	0.02	0.00%	31.74%
DURATION	→ CARDINAL + REL + DURATION	2	4081	0.05	0.00%	31.74%
DURATION	→ CARDINAL + SEASON	1	4081	0.02	0.00%	31.74%
DURATION	→ CARDINAL + SPORTS SEASON	2	4081	0.05	0.00%	31.74%
DURATION	→ CARDINAL + UNIT	1	4081	0.02	0.00%	31.74%
DURATION	→ CARDINAL + o	3	4081	0.07	0.00%	31.75%
DURATION	→ CARDINAL + o + CARDINAL	1	4081	0.02	0.00%	31.75%
DURATION	→ CARDINAL + o + CARDINAL + DURATION	1	4081	0.02	0.00%	31.75%
DURATION	→ CARDINAL + o + DURATION	74	4081	1.81	0.08%	31.83%
DURATION	→ CITY + o	2	4081	0.05	0.00%	31.83%
DURATION	→ DATE + DURATION	1	4081	0.02	0.00%	31.83%
DURATION	→ DATE + o + DATE	2	4081	0.05	0.00%	31.83%
DURATION	→ DAY + DURATION	2	4081	0.05	0.00%	31.84%
DURATION	→ DURATION + DURATION	13	4081	0.32	0.01%	31.85%
DURATION	→ DURATION + QUAL	15	4081	0.37	0.02%	31.87%
DURATION	→ DURATION + REL	11	4081	0.27	0.01%	31.88%
DURATION	→ DURATION + REL + DAY	1	4081	0.02	0.00%	31.88%
DURATION	→ DURATION + YEAR + o + YEAR	1	4081	0.02	0.00%	31.88%
DURATION	→ DURATION + o	6	4081	0.15	0.01%	31.89%
DURATION	→ DURATION + o + CARDINAL	5	4081	0.12	0.01%	31.89%
DURATION	→ DURATION + o + DATE	1	4081	0.02	0.00%	31.89%
DURATION	→ DURATION + o + DURATION	27	4081	0.66	0.03%	31.92%
DURATION	→ DURATION + o + QUAL	3	4081	0.07	0.00%	31.93%
DURATION	→ DURATION + o + YEAR	4	4081	0.10	0.00%	31.93%
DURATION	→ FIRST + DURATION	1	4081	0.02	0.00%	31.93%
DURATION	→ FIRST + o	1	4081	0.02	0.00%	31.93%
DURATION	→ FOLD + o + DURATION	1	4081	0.02	0.00%	31.93%
DURATION	→ MONEY + o + QUANTITY:OTHER	1	4081	0.02	0.00%	31.94%

rule	children	count	of	type %	% total	cumul've
DURATION	→ MONTH + o + MONTH	3	4081	0.07	0.00%	31.94%
DURATION	→ NUMDAY + DURATION	2	4081	0.05	0.00%	31.94%
DURATION	→ ORDINAL	2	4081	0.05	0.00%	31.94%
DURATION	→ ORDINAL + CARDINAL	2	4081	0.05	0.00%	31.94%
DURATION	→ ORDINAL + CARDINAL + DURATION	4	4081	0.10	0.00%	31.95%
DURATION	→ ORDINAL + DURATION	50	4081	1.23	0.05%	32.00%
DURATION	→ ORDINAL + DURATION + o	2	4081	0.05	0.00%	32.01%
DURATION	→ ORDINAL + REL + DURATION	1	4081	0.02	0.00%	32.01%
DURATION	→ ORDINAL + o + DURATION	5	4081	0.12	0.01%	32.01%
DURATION	→ ORG:CORP + o	24	4081	0.59	0.03%	32.04%
DURATION	→ ORG:CORP + o + DURATION	1	4081	0.02	0.00%	32.04%
DURATION	→ PERIODIC + o + MONTH + NUMDAY	2	4081	0.05	0.00%	32.04%
DURATION	→ QUAL + CARDINAL	1	4081	0.02	0.00%	32.04%
DURATION	→ QUAL + CARDINAL + DURATION	12	4081	0.29	0.01%	32.05%
DURATION	→ QUAL + CARDINAL + o	1	4081	0.02	0.00%	32.06%
DURATION	→ QUAL + CARDINAL + o + DURATION	1	4081	0.02	0.00%	32.06%
DURATION	→ QUAL + DATE	1	4081	0.02	0.00%	32.06%
DURATION	→ QUAL + DURATION	32	4081	0.78	0.03%	32.09%
DURATION	→ QUAL + DURATION + REL	1	4081	0.02	0.00%	32.09%
DURATION	→ QUAL + QUAL + DURATION	1	4081	0.02	0.00%	32.09%
DURATION	→ QUAL + o + DATE	1	4081	0.02	0.00%	32.10%
DURATION	→ QUAL + o + DURATION	46	4081	1.13	0.05%	32.15%
DURATION	→ REGION + DURATION	1	4081	0.02	0.00%	32.15%
DURATION	→ REL + CARDINAL	2	4081	0.05	0.00%	32.15%
DURATION	→ REL + CARDINAL + DURATION	6	4081	0.15	0.01%	32.16%
DURATION	→ REL + DATE	1	4081	0.02	0.00%	32.16%
DURATION	→ REL + DURATION	36	4081	0.88	0.04%	32.20%
DURATION	→ REL + DURATION + o	1	4081	0.02	0.00%	32.20%
DURATION	→ REL + o	6	4081	0.15	0.01%	32.20%
DURATION	→ REL + o + DURATION	3	4081	0.07	0.00%	32.21%
DURATION	→ SEASON + DURATION	1	4081	0.02	0.00%	32.21%
DURATION	→ SEASON + o + SEASON	1	4081	0.02	0.00%	32.21%
DURATION	→ SEASON + o + YEAR	2	4081	0.05	0.00%	32.21%
DURATION	→ STATE + o	2	4081	0.05	0.00%	32.21%
DURATION	→ UNIT	1	4081	0.02	0.00%	32.21%
DURATION	→ YEAR	1	4081	0.02	0.00%	32.21%
DURATION	→ YEAR + o + YEAR	1	4081	0.02	0.00%	32.22%
DURATION	→ o + DATE + o + DATE	1	4081	0.02	0.00%	32.22%
DURATION	→ o + DURATION	9	4081	0.22	0.01%	32.23%

rule	children	count	of	type %	% total	cumul've
DURATION	→ o + DURATION + o	1	4081	0.02	0.00%	32.23%
DURATION	→ o + DURATION + o + MONTH	1	4081	0.02	0.00%	32.23%
DURATION	→ o + GPE	1	4081	0.02	0.00%	32.23%
DURATION	→ o + ORG:CORP	11	4081	0.27	0.01%	32.24%
DURATION	→ o + REL + DURATION	1	4081	0.02	0.00%	32.24%
DURATION	→ o + YEAR + o + YEAR	1	4081	0.02	0.00%	32.24%
ELECTRONICS	→ CARDINAL	30	58	51.72	0.03%	32.28%
ELECTRONICS	→ ELECTRONICS + ELECTRONICS	1	58	1.72	0.00%	32.28%
ELECTRONICS	→ ELECTRONICS + o + ELECTRONICS	1	58	1.72	0.00%	32.28%
ELECTRONICS	→ NAME	3	58	5.17	0.00%	32.28%
ELECTRONICS	→ NICKNAME	1	58	1.72	0.00%	32.28%
ELECTRONICS	→ ORG:CORP + CARDINAL	9	58	15.52	0.01%	32.29%
ELECTRONICS	→ ORG:CORP + ELECTRONICS	1	58	1.72	0.00%	32.29%
ELECTRONICS	→ ORG:CORP + o	9	58	15.52	0.01%	32.30%
ELECTRONICS	→ o + CARDINAL	3	58	5.17	0.00%	32.31%
ENERGY	→ CARDINAL + UNIT	11	13	84.62	0.01%	32.32%
ENERGY	→ CARDINAL + o + UNIT	2	13	15.38	0.00%	32.32%
EVENT	→ AWARD	4	148	2.70	0.00%	32.32%
EVENT	→ AWARD + o	3	148	2.03	0.00%	32.33%
EVENT	→ BUILDING	1	148	0.68	0.00%	32.33%
EVENT	→ CITY	1	148	0.68	0.00%	32.33%
EVENT	→ CITY + CARDINAL + o	1	148	0.68	0.00%	32.33%
EVENT	→ CITY + o	11	148	7.43	0.01%	32.34%
EVENT	→ DATE	9	148	6.08	0.01%	32.35%
EVENT	→ DATE + NAME + o	1	148	0.68	0.00%	32.35%
EVENT	→ DATE + ORG:POLITICAL + o	1	148	0.68	0.00%	32.35%
EVENT	→ DATE + o	7	148	4.73	0.01%	32.36%
EVENT	→ DAY + o	2	148	1.35	0.00%	32.36%
EVENT	→ EVENT + o	1	148	0.68	0.00%	32.37%
EVENT	→ EVENT + o + DATE + o + EVENT + o + DATE	1	148	0.68	0.00%	32.37%
EVENT	→ HOTEL	3	148	2.03	0.00%	32.37%
EVENT	→ MONTH + DURATION	1	148	0.68	0.00%	32.37%
EVENT	→ MONTH + NUMDAY + o	1	148	0.68	0.00%	32.37%
EVENT	→ MONTH + NUMDAY + o + CITY	1	148	0.68	0.00%	32.37%
EVENT	→ MONTH + YEAR + o	3	148	2.03	0.00%	32.38%
EVENT	→ NAME + o	1	148	0.68	0.00%	32.38%
EVENT	→ NAME + o + DURATION	1	148	0.68	0.00%	32.38%
EVENT	→ NATIONALITY + o	7	148	4.73	0.01%	32.39%
EVENT	→ NATIONALITY + o + DURATION	1	148	0.68	0.00%	32.39%

rule	children	count	of	type %	% total	cumul've
EVENT	→ NORP:POLITICAL + o	1	148	0.68	0.00%	32.39%
EVENT	→ ORDINAL + o	1	148	0.68	0.00%	32.39%
EVENT	→ ORDINAL + o + EVENT	1	148	0.68	0.00%	32.39%
EVENT	→ ORDINAL + o + EVENT + o + WOA	1	148	0.68	0.00%	32.39%
EVENT	→ ORG:CORP + DATE + o	1	148	0.68	0.00%	32.39%
EVENT	→ ORG:OTHER + o	2	148	1.35	0.00%	32.39%
EVENT	→ PERIODIC	1	148	0.68	0.00%	32.40%
EVENT	→ ROLE + o	1	148	0.68	0.00%	32.40%
EVENT	→ SEASON + o	1	148	0.68	0.00%	32.40%
EVENT	→ STATE + o + PERCENT + EVENT + o	1	148	0.68	0.00%	32.40%
EVENT	→ STREET	2	148	1.35	0.00%	32.40%
EVENT	→ YEAR + CITY + o	1	148	0.68	0.00%	32.40%
EVENT	→ YEAR + o	17	148	11.49	0.02%	32.42%
EVENT	→ YEAR + o + CITY + o + COUNTRY	1	148	0.68	0.00%	32.42%
EVENT	→ o + CITY	1	148	0.68	0.00%	32.42%
EVENT	→ o + CITY + o	1	148	0.68	0.00%	32.42%
EVENT	→ o + DATE	1	148	0.68	0.00%	32.42%
EVENT	→ o + DAY	41	148	27.70	0.04%	32.47%
EVENT	→ o + DAY + o	1	148	0.68	0.00%	32.47%
EVENT	→ o + DURATION	5	148	3.38	0.01%	32.48%
EVENT	→ o + YEAR	4	148	2.70	0.00%	32.48%
FACILITY	→ BUILDING + o	1	67	1.49	0.00%	32.48%
FACILITY	→ CARDINAL + o	1	67	1.49	0.00%	32.48%
FACILITY	→ CITY	10	67	14.93	0.01%	32.49%
FACILITY	→ CITY + o	13	67	19.40	0.01%	32.51%
FACILITY	→ CITY + o + CARDINAL	1	67	1.49	0.00%	32.51%
FACILITY	→ COUNTRY + o	1	67	1.49	0.00%	32.51%
FACILITY	→ GPE	3	67	4.48	0.00%	32.51%
FACILITY	→ GPE + o	1	67	1.49	0.00%	32.51%
FACILITY	→ LOCATION:OTHER	8	67	11.94	0.01%	32.52%
FACILITY	→ NAME	2	67	2.99	0.00%	32.52%
FACILITY	→ NAME + ORG:EDU + o	2	67	2.99	0.00%	32.53%
FACILITY	→ NAME + o	8	67	11.94	0.01%	32.53%
FACILITY	→ OCEAN + o	1	67	1.49	0.00%	32.54%
FACILITY	→ ORG:CORP + o	1	67	1.49	0.00%	32.54%
FACILITY	→ ORG:EDU + o	1	67	1.49	0.00%	32.54%
FACILITY	→ STATE + o	2	67	2.99	0.00%	32.54%
FACILITY	→ o + CARDINAL	6	67	8.96	0.01%	32.55%
FACILITY	→ o + CARDINAL + o + CARDINAL	1	67	1.49	0.00%	32.55%

rule	children	count	of	type %	% total	cumul've
FACILITY	→ o + CITY	1	67	1.49	0.00%	32.55%
FACILITY	→ o + NAME	1	67	1.49	0.00%	32.55%
FACILITY	→ o + ORDINAL	1	67	1.49	0.00%	32.55%
FACILITY	→ o + STATE + o	1	67	1.49	0.00%	32.55%
FILM	→ CARDINAL + o	1	21	4.76	0.00%	32.55%
FILM	→ CITY	1	21	4.76	0.00%	32.55%
FILM	→ DURATION + o	3	21	14.29	0.00%	32.56%
FILM	→ FIRST	1	21	4.76	0.00%	32.56%
FILM	→ NAME	2	21	9.52	0.00%	32.56%
FILM	→ NAME + o	1	21	4.76	0.00%	32.56%
FILM	→ PER	1	21	4.76	0.00%	32.56%
FILM	→ STATE + o	1	21	4.76	0.00%	32.56%
FILM	→ TIME + o	1	21	4.76	0.00%	32.57%
FILM	→ o + CARDINAL	3	21	14.29	0.00%	32.57%
FILM	→ o + FIRST + o + FIRST	1	21	4.76	0.00%	32.57%
FILM	→ o + NAME	1	21	4.76	0.00%	32.57%
FILM	→ o + ORDINAL + o + GOD	1	21	4.76	0.00%	32.57%
FILM	→ o + PER	3	21	14.29	0.00%	32.57%
FIRST	→ CARDINAL + MULT	4	25	16.00	0.00%	32.58%
FIRST	→ CITY + ROLE	1	25	4.00	0.00%	32.58%
FIRST	→ FIRST + o + FIRST	17	25	68.00	0.02%	32.60%
FIRST	→ QUAL + CARDINAL	3	25	12.00	0.00%	32.60%
FOLD	→ CARDINAL + MULT	1	146	0.68	0.00%	32.60%
FOLD	→ CARDINAL + o	88	146	60.27	0.09%	32.70%
FOLD	→ CARDINAL + o + CARDINAL	1	146	0.68	0.00%	32.70%
FOLD	→ QUAL + FOLD	55	146	37.67	0.06%	32.76%
FOLD	→ QUAL + o + FOLD	1	146	0.68	0.00%	32.76%
FUND	→ CITY + o	1	34	2.94	0.00%	32.76%
FUND	→ COUNTRY + o	4	34	11.76	0.00%	32.76%
FUND	→ NAME	1	34	2.94	0.00%	32.77%
FUND	→ NAME + DISEASE + o	1	34	2.94	0.00%	32.77%
FUND	→ NAME + STATE + o	1	34	2.94	0.00%	32.77%
FUND	→ NAME + o	13	34	38.24	0.01%	32.78%
FUND	→ NAME + o + UNIT + o	1	34	2.94	0.00%	32.78%
FUND	→ NATIONALITY + o	1	34	2.94	0.00%	32.78%
FUND	→ ORG:CORP + o	7	34	20.59	0.01%	32.79%
FUND	→ ORG:CORP + o + MONEY + FUND	1	34	2.94	0.00%	32.79%
FUND	→ STREET + o	1	34	2.94	0.00%	32.79%
FUND	→ o + COUNTRY + o	2	34	5.88	0.00%	32.80%

rule	children	count	of	type %	% total	cumul've
GOVERNMENT	→ BUILDING	233	837	27.84	0.25%	33.05%
GOVERNMENT	→ CITY	71	837	8.48	0.08%	33.12%
GOVERNMENT	→ CITY + o	28	837	3.35	0.03%	33.15%
GOVERNMENT	→ CITY + o + CORP JARGON	2	837	0.24	0.00%	33.16%
GOVERNMENT	→ CONTINENT + o	1	837	0.12	0.00%	33.16%
GOVERNMENT	→ COUNTRY + o	9	837	1.08	0.01%	33.17%
GOVERNMENT	→ FACILITY	1	837	0.12	0.00%	33.17%
GOVERNMENT	→ GOVERNMENT + o	70	837	8.36	0.08%	33.24%
GOVERNMENT	→ GOVERNMENT + o + GOVERNMENT	1	837	0.12	0.00%	33.24%
GOVERNMENT	→ GOVERNMENT + o + GOVERNMENT + o + GOVERNMENT + o	1	837	0.12	0.00%	33.25%
GOVERNMENT	→ GPE	4	837	0.48	0.00%	33.25%
GOVERNMENT	→ GPE + o	2	837	0.24	0.00%	33.25%
GOVERNMENT	→ GPE + o + CARDINAL	1	837	0.12	0.00%	33.25%
GOVERNMENT	→ GRP:LOC + o	1	837	0.12	0.00%	33.25%
GOVERNMENT	→ LOCATION:OTHER	16	837	1.91	0.02%	33.27%
GOVERNMENT	→ LOCATION:OTHER + o	2	837	0.24	0.00%	33.27%
GOVERNMENT	→ NAME	7	837	0.84	0.01%	33.28%
GOVERNMENT	→ NAME + CORP JARGON	3	837	0.36	0.00%	33.28%
GOVERNMENT	→ NAME + o	20	837	2.39	0.02%	33.31%
GOVERNMENT	→ NAME + o + CORP JARGON + o	1	837	0.12	0.00%	33.31%
GOVERNMENT	→ NATIONALITY + GOVERNMENT	9	837	1.08	0.01%	33.32%
GOVERNMENT	→ NATIONALITY + ORDINAL + o	1	837	0.12	0.00%	33.32%
GOVERNMENT	→ NATIONALITY + o	129	837	15.41	0.14%	33.46%
GOVERNMENT	→ NORP:OTHER + o	43	837	5.14	0.05%	33.50%
GOVERNMENT	→ ORDINAL + NATIONALITY + o	5	837	0.60	0.01%	33.51%
GOVERNMENT	→ ORDINAL + o	9	837	1.08	0.01%	33.52%
GOVERNMENT	→ ORG:OTHER + o	1	837	0.12	0.00%	33.52%
GOVERNMENT	→ ORG:POLITICAL + o	1	837	0.12	0.00%	33.52%
GOVERNMENT	→ REGION	2	837	0.24	0.00%	33.52%
GOVERNMENT	→ REGION + o	4	837	0.48	0.00%	33.53%
GOVERNMENT	→ RIVER + o	1	837	0.12	0.00%	33.53%
GOVERNMENT	→ ROLE + o	3	837	0.36	0.00%	33.53%
GOVERNMENT	→ STATE	4	837	0.48	0.00%	33.54%
GOVERNMENT	→ STATE + o	75	837	8.96	0.08%	33.62%
GOVERNMENT	→ STREET + o	1	837	0.12	0.00%	33.62%
GOVERNMENT	→ o + CITY	4	837	0.48	0.00%	33.62%
GOVERNMENT	→ o + CONTINENT	1	837	0.12	0.00%	33.62%
GOVERNMENT	→ o + CORP JARGON	21	837	2.51	0.02%	33.65%

rule	children	count	of	type %	% total	cumul've
GOVERNMENT	→ o + CORP JARGON + o	1	837	0.12	0.00%	33.65%
GOVERNMENT	→ o + COUNTRY	29	837	3.46	0.03%	33.68%
GOVERNMENT	→ o + GOVERNMENT	4	837	0.48	0.00%	33.68%
GOVERNMENT	→ o + GOVERNMENT + o + GOVERNMENT + o + GOVERNMENT	3	837	0.36	0.00%	33.69%
GOVERNMENT	→ o + NAME + o + CORP JARGON	1	837	0.12	0.00%	33.69%
GOVERNMENT	→ o + NATIONALITY	3	837	0.36	0.00%	33.69%
GOVERNMENT	→ o + NATIONALITY + o	1	837	0.12	0.00%	33.69%
GOVERNMENT	→ o + NATIONALITY + o + CITY + o + STATE	1	837	0.12	0.00%	33.69%
GOVERNMENT	→ o + NORP:OTHER + o	1	837	0.12	0.00%	33.69%
GOVERNMENT	→ o + STATE	2	837	0.24	0.00%	33.70%
GOVERNMENT	→ o + STATE + o	3	837	0.36	0.00%	33.70%
GPE	→ CITY + o	2	12	16.67	0.00%	33.70%
GPE	→ CITY + o + GPE	1	12	8.33	0.00%	33.70%
GPE	→ GPE + o + ORDINAL	1	12	8.33	0.00%	33.70%
GPE	→ LOCATION:OTHER	2	12	16.67	0.00%	33.71%
GPE	→ NAME + o	2	12	16.67	0.00%	33.71%
GPE	→ NATIONALITY + o	1	12	8.33	0.00%	33.71%
GPE	→ NORP:OTHER + o	2	12	16.67	0.00%	33.71%
GPE	→ o + FIRST + o	1	12	8.33	0.00%	33.71%
GRP:LOC	→ GPE + o + CITY	1	18	5.56	0.00%	33.71%
GRP:LOC	→ NAME + o	1	18	5.56	0.00%	33.71%
GRP:LOC	→ NORP:OTHER + o	2	18	11.11	0.00%	33.72%
GRP:LOC	→ ORDINAL + o	14	18	77.78	0.02%	33.73%
GRP:ORG	→ CITY	17	401	4.24	0.02%	33.75%
GRP:ORG	→ CITY + o + CARDINAL	1	401	0.25	0.00%	33.75%
GRP:ORG	→ CORP JARGON	1	401	0.25	0.00%	33.75%
GRP:ORG	→ COUNTRY + o + CARDINAL	1	401	0.25	0.00%	33.75%
GRP:ORG	→ GOVERNMENT + ROLE	1	401	0.25	0.00%	33.75%
GRP:ORG	→ MEDIA + CARDINAL	1	401	0.25	0.00%	33.75%
GRP:ORG	→ ORG:CORP	1	401	0.25	0.00%	33.76%
GRP:ORG	→ ORG:CORP + CORP JARGON	2	401	0.50	0.00%	33.76%
GRP:ORG	→ REGION	1	401	0.25	0.00%	33.76%
GRP:ORG	→ STREET	340	401	84.79	0.37%	34.13%
GRP:ORG	→ SUBURB	12	401	2.99	0.01%	34.14%
GRP:ORG	→ o + CARDINAL	23	401	5.74	0.02%	34.16%
GRP:PER	→ CITY + o	1	124	0.81	0.00%	34.16%
GRP:PER	→ GOVERNMENT + NORP:POLITICAL	1	124	0.81	0.00%	34.17%
GRP:PER	→ GPE	1	124	0.81	0.00%	34.17%

rule	children	count	of	type %	% total	cumul've
GRP:PER	→ HON + NAME	1	124	0.81	0.00%	34.17%
GRP:PER	→ NAME	70	124	56.45	0.08%	34.24%
GRP:PER	→ NAME + o	45	124	36.29	0.05%	34.29%
GRP:PER	→ PER + o	1	124	0.81	0.00%	34.29%
GRP:PER	→ SUBURB	3	124	2.42	0.00%	34.30%
GRP:PER	→ o + NAME	1	124	0.81	0.00%	34.30%
HON	→ HON + o + HON	2	3	66.67	0.00%	34.30%
HON	→ NAME	1	3	33.33	0.00%	34.30%
HOSPITAL	→ CITY + o	2	22	9.09	0.00%	34.30%
HOSPITAL	→ NAME + o	8	22	36.36	0.01%	34.31%
HOSPITAL	→ NAME + o + CORP JARGON	1	22	4.55	0.00%	34.31%
HOSPITAL	→ ORDINAL + o	6	22	27.27	0.01%	34.32%
HOSPITAL	→ ORG:EDU + o	1	22	4.55	0.00%	34.32%
HOSPITAL	→ REGION + o	1	22	4.55	0.00%	34.32%
HOSPITAL	→ STATE + o	1	22	4.55	0.00%	34.32%
HOSPITAL	→ SUBURB + o	1	22	4.55	0.00%	34.32%
HOSPITAL	→ o + STATE	1	22	4.55	0.00%	34.32%
HOTEL	→ CARDINAL + o	1	28	3.57	0.00%	34.33%
HOTEL	→ CITY + o	4	28	14.29	0.00%	34.33%
HOTEL	→ LOCATION:OTHER	1	28	3.57	0.00%	34.33%
HOTEL	→ NAME	6	28	21.43	0.01%	34.34%
HOTEL	→ NAME + CITY	1	28	3.57	0.00%	34.34%
HOTEL	→ NAME + CORP JARGON	1	28	3.57	0.00%	34.34%
HOTEL	→ NAME + o	7	28	25.00	0.01%	34.35%
HOTEL	→ NORP:OTHER + o	1	28	3.57	0.00%	34.35%
HOTEL	→ ORG:CORP + o	2	28	7.14	0.00%	34.35%
HOTEL	→ o + CITY	2	28	7.14	0.00%	34.35%
HOTEL	→ o + CORP JARGON	2	28	7.14	0.00%	34.35%
HURRICANE	→ FIRST	26	104	25.00	0.03%	34.38%
HURRICANE	→ NAME	1	104	0.96	0.00%	34.38%
HURRICANE	→ NAME + NAME	1	104	0.96	0.00%	34.38%
HURRICANE	→ o + FIRST	76	104	73.08	0.08%	34.47%
INDEX	→ CARDINAL	1	535	0.19	0.00%	34.47%
INDEX	→ CARDINAL + MEDIA + o	1	535	0.19	0.00%	34.47%
INDEX	→ CARDINAL + o	4	535	0.75	0.00%	34.47%
INDEX	→ CITY + o	6	535	1.12	0.01%	34.48%
INDEX	→ COUNTRY + o	2	535	0.37	0.00%	34.48%
INDEX	→ DATE + o	1	535	0.19	0.00%	34.48%
INDEX	→ GOVERNMENT + o	1	535	0.19	0.00%	34.48%

rule	children	count	of	type %	% total	cumul've
INDEX	→ GRP:ORG	1	535	0.19	0.00%	34.48%
INDEX	→ MEDIA	37	535	6.92	0.04%	34.52%
INDEX	→ MEDIA + CARDINAL + o	5	535	0.93	0.01%	34.53%
INDEX	→ MEDIA + o	169	535	31.59	0.18%	34.71%
INDEX	→ MEDIA + o + CARDINAL + o	4	535	0.75	0.00%	34.72%
INDEX	→ MONTH + o	2	535	0.37	0.00%	34.72%
INDEX	→ NAME + o	6	535	1.12	0.01%	34.73%
INDEX	→ NATIONALITY + o	6	535	1.12	0.01%	34.73%
INDEX	→ ORDINAL + o	2	535	0.37	0.00%	34.73%
INDEX	→ ORG:CORP	16	535	2.99	0.02%	34.75%
INDEX	→ ORG:CORP + CARDINAL	83	535	15.51	0.09%	34.84%
INDEX	→ ORG:CORP + CARDINAL + o	50	535	9.35	0.05%	34.89%
INDEX	→ ORG:CORP + GOVERNMENT + o	9	535	1.68	0.01%	34.90%
INDEX	→ ORG:CORP + o	116	535	21.68	0.13%	35.03%
INDEX	→ ORG:CORP + o + CARDINAL	4	535	0.75	0.00%	35.03%
INDEX	→ ORG:CORP + o + CARDINAL + o	4	535	0.75	0.00%	35.04%
INDEX	→ ORG:OTHER + o	2	535	0.37	0.00%	35.04%
INDEX	→ o + CARDINAL	2	535	0.37	0.00%	35.04%
INDEX	→ o + CARDINAL + o	1	535	0.19	0.00%	35.04%
INDEX FUND	→ ORG:CORP + o	2	2	100.00	0.00%	35.05%
INI	→ INI + INI	1	2	50.00	0.00%	35.05%
INI	→ INI + o + INI	1	2	50.00	0.00%	35.05%
IPOINTS	→ CARDINAL	1863	2221	83.88	2.01%	37.06%
IPOINTS	→ CARDINAL + CARDINAL	1	2221	0.05	0.00%	37.06%
IPOINTS	→ CARDINAL + COUNTRY	1	2221	0.05	0.00%	37.06%
IPOINTS	→ CARDINAL + UNIT	315	2221	14.18	0.34%	37.40%
IPOINTS	→ CARDINAL + o	4	2221	0.18	0.00%	37.40%
IPOINTS	→ CARDINAL + o + UNIT	8	2221	0.36	0.01%	37.41%
IPOINTS	→ FIRST	1	2221	0.05	0.00%	37.41%
IPOINTS	→ IPOINTS + o + IPOINTS	5	2221	0.23	0.01%	37.42%
IPOINTS	→ QUAL + CARDINAL	1	2221	0.05	0.00%	37.42%
IPOINTS	→ QUAL + IPOINTS	8	2221	0.36	0.01%	37.43%
IPOINTS	→ QUAL + IPOINTS + o + IPOINTS	1	2221	0.05	0.00%	37.43%
IPOINTS	→ QUAL + UNIT	1	2221	0.05	0.00%	37.43%
IPOINTS	→ QUAL + o + IPOINTS	2	2221	0.09	0.00%	37.43%
IPOINTS	→ UNIT	10	2221	0.45	0.01%	37.44%
LANGUAGE	→ CARDINAL	2	3	66.67	0.00%	37.45%
LANGUAGE	→ DURATION + o	1	3	33.33	0.00%	37.45%
LAW	→ CARDINAL + COUNTRY + CARDINAL	1	221	0.45	0.00%	37.45%

rule	children	count	of	type %	% total	cumul've
LAW	→ CARDINAL + o	2	221	0.90	0.00%	37.45%
LAW	→ CITY + o	8	221	3.62	0.01%	37.46%
LAW	→ COUNTRY + o	1	221	0.45	0.00%	37.46%
LAW	→ DATE + o	1	221	0.45	0.00%	37.46%
LAW	→ GOVERNMENT + o	4	221	1.81	0.00%	37.46%
LAW	→ NAME	25	221	11.31	0.03%	37.49%
LAW	→ NAME + o	10	221	4.52	0.01%	37.50%
LAW	→ NAME + o + NAME	2	221	0.90	0.00%	37.50%
LAW	→ NATIONALITY + LAW	1	221	0.45	0.00%	37.51%
LAW	→ NATIONALITY + o	10	221	4.52	0.01%	37.52%
LAW	→ NATIONALITY + o + DATE	1	221	0.45	0.00%	37.52%
LAW	→ NATIONALITY + o + YEAR	2	221	0.90	0.00%	37.52%
LAW	→ ORDINAL	7	221	3.17	0.01%	37.53%
LAW	→ ORDINAL + o	19	221	8.60	0.02%	37.55%
LAW	→ PER	2	221	0.90	0.00%	37.55%
LAW	→ PER + o + GOVERNMENT	2	221	0.90	0.00%	37.55%
LAW	→ REGION + o	1	221	0.45	0.00%	37.55%
LAW	→ YEAR + o	1	221	0.45	0.00%	37.55%
LAW	→ o + CARDINAL	100	221	45.25	0.11%	37.66%
LAW	→ o + CARDINAL + o	5	221	2.26	0.01%	37.67%
LAW	→ o + CARDINAL + o + CARDINAL	3	221	1.36	0.00%	37.67%
LAW	→ o + CARDINAL + o + CARDINAL + o + WOA	1	221	0.45	0.00%	37.67%
LAW	→ o + CARDINAL + o + LAW	7	221	3.17	0.01%	37.68%
LAW	→ o + DATE	3	221	1.36	0.00%	37.68%
LAW	→ o + YEAR	2	221	0.90	0.00%	37.68%
LOCATION:OTHER	→ CITY + o	33	72	45.83	0.04%	37.72%
LOCATION:OTHER	→ GPE + o	2	72	2.78	0.00%	37.72%
LOCATION:OTHER	→ NAME	3	72	4.17	0.00%	37.73%
LOCATION:OTHER	→ NAME + o	17	72	23.61	0.02%	37.74%
LOCATION:OTHER	→ NATIONALITY + LOCATION:OTHER	1	72	1.39	0.00%	37.75%
LOCATION:OTHER	→ NATIONALITY + o	3	72	4.17	0.00%	37.75%
LOCATION:OTHER	→ NORP:OTHER + o	1	72	1.39	0.00%	37.75%
LOCATION:OTHER	→ OCEAN + o	1	72	1.39	0.00%	37.75%
LOCATION:OTHER	→ STATE + o	2	72	2.78	0.00%	37.75%
LOCATION:OTHER	→ o + CARDINAL	1	72	1.39	0.00%	37.75%
LOCATION:OTHER	→ o + COUNTRY	4	72	5.56	0.00%	37.76%
LOCATION:OTHER	→ o + LOCATION:OTHER	1	72	1.39	0.00%	37.76%
LOCATION:OTHER	→ o + NAME	2	72	2.78	0.00%	37.76%
LOCATION:OTHER	→ o + STATE	1	72	1.39	0.00%	37.76%

rule	children	count	of	type %	% total	cumul've
MEDIA	→ ARMY + o	1	661	0.15	0.00%	37.76%
MEDIA	→ CITY + DAY + o	1	661	0.15	0.00%	37.76%
MEDIA	→ CITY + PERIODIC + o	4	661	0.61	0.00%	37.77%
MEDIA	→ CITY + o	62	661	9.38	0.07%	37.84%
MEDIA	→ CITY + o + STATE + o	1	661	0.15	0.00%	37.84%
MEDIA	→ CONTINENT	1	661	0.15	0.00%	37.84%
MEDIA	→ COUNTRY + PERIODIC	3	661	0.45	0.00%	37.84%
MEDIA	→ COUNTRY + o	7	661	1.06	0.01%	37.85%
MEDIA	→ DATE + NAME + o + CORP JARGON + o	1	661	0.15	0.00%	37.85%
MEDIA	→ DAY + o	1	661	0.15	0.00%	37.85%
MEDIA	→ DURATION	1	661	0.15	0.00%	37.85%
MEDIA	→ FIRST + o	2	661	0.30	0.00%	37.85%
MEDIA	→ GPE + o	2	661	0.30	0.00%	37.86%
MEDIA	→ GRP:ORG	1	661	0.15	0.00%	37.86%
MEDIA	→ GRP:ORG + o	9	661	1.36	0.01%	37.87%
MEDIA	→ LOCATION:OTHER + o	1	661	0.15	0.00%	37.87%
MEDIA	→ MEDIA + CORP JARGON	17	661	2.57	0.02%	37.89%
MEDIA	→ MEDIA + o	79	661	11.95	0.09%	37.97%
MEDIA	→ NAME	290	661	43.87	0.31%	38.28%
MEDIA	→ NAME + o	24	661	3.63	0.03%	38.31%
MEDIA	→ NAME + o + CORP JARGON	3	661	0.45	0.00%	38.31%
MEDIA	→ NATIONALITY + o	26	661	3.93	0.03%	38.34%
MEDIA	→ NATIONALITY + o + CORP JARGON	1	661	0.15	0.00%	38.34%
MEDIA	→ NORP:OTHER	1	661	0.15	0.00%	38.34%
MEDIA	→ ORG:CORP	1	661	0.15	0.00%	38.34%
MEDIA	→ ORG:CORP + o	3	661	0.45	0.00%	38.35%
MEDIA	→ ORG:EDU + o	3	661	0.45	0.00%	38.35%
MEDIA	→ PERIODIC + o	2	661	0.30	0.00%	38.35%
MEDIA	→ REGION + o	2	661	0.30	0.00%	38.36%
MEDIA	→ STATE + o	2	661	0.30	0.00%	38.36%
MEDIA	→ o + CITY	5	661	0.76	0.01%	38.36%
MEDIA	→ o + CITY + o	1	661	0.15	0.00%	38.36%
MEDIA	→ o + CONTINENT	12	661	1.82	0.01%	38.38%
MEDIA	→ o + CONTINENT + o	1	661	0.15	0.00%	38.38%
MEDIA	→ o + CORP JARGON	26	661	3.93	0.03%	38.41%
MEDIA	→ o + COUNTRY	4	661	0.61	0.00%	38.41%
MEDIA	→ o + COUNTRY + o	1	661	0.15	0.00%	38.41%
MEDIA	→ o + GRP:ORG + o	51	661	7.72	0.06%	38.47%
MEDIA	→ o + NAME	1	661	0.15	0.00%	38.47%

rule	children	count	of	type %	% total	cumul've
MEDIA	→ o + NATIONALITY	1	661	0.15	0.00%	38.47%
MEDIA	→ o + NATIONALITY + o	2	661	0.30	0.00%	38.47%
MEDIA	→ o + NORP:OTHER + GRP:ORG + o	2	661	0.30	0.00%	38.47%
MEDIA	→ o + NORP:OTHER + GRP:ORG + o + PERIODIC	1	661	0.15	0.00%	38.47%
MEDIA	→ o + ORG:OTHER	1	661	0.15	0.00%	38.48%
MONEY	→ CARDINAL	157	12580	1.25	0.17%	38.64%
MONEY	→ CARDINAL + MULT	15	12580	0.12	0.02%	38.66%
MONEY	→ CARDINAL + NATIONALITY + UNIT	1	12580	0.01	0.00%	38.66%
MONEY	→ CARDINAL + NUMDAY	1	12580	0.01	0.00%	38.66%
MONEY	→ CARDINAL + UNIT	1880	12580	14.94	2.03%	40.69%
MONEY	→ CARDINAL + o	2	12580	0.02	0.00%	40.69%
MONEY	→ CARDINAL + o + CARDINAL + UNIT	2	12580	0.02	0.00%	40.69%
MONEY	→ CARDINAL + o + CARDINAL + o + UNIT	1	12580	0.01	0.00%	40.70%
MONEY	→ CARDINAL + o + MONEY	1	12580	0.01	0.00%	40.70%
MONEY	→ CARDINAL + o + UNIT	61	12580	0.48	0.07%	40.76%
MONEY	→ CARDINAL + o + YEAR + o + UNIT	1	12580	0.01	0.00%	40.76%
MONEY	→ FIRST + UNIT	3	12580	0.02	0.00%	40.77%
MONEY	→ FOLD + o + MONEY	1	12580	0.01	0.00%	40.77%
MONEY	→ MONEY + QUAL	26	12580	0.21	0.03%	40.80%
MONEY	→ MONEY + o + DURATION	1	12580	0.01	0.00%	40.80%
MONEY	→ MONEY + o + MONEY	194	12580	1.54	0.21%	41.01%
MONEY	→ MONEY + o + MONEY + o	4	12580	0.03	0.00%	41.01%
MONEY	→ MONEY + o + MONEY + o + MONEY	2	12580	0.02	0.00%	41.01%
MONEY	→ MONEY + o + MONTH	3	12580	0.02	0.00%	41.02%
MONEY	→ MONEY + o + QUAL	1	12580	0.01	0.00%	41.02%
MONEY	→ MONTH + o + MONEY	1	12580	0.01	0.00%	41.02%
MONEY	→ MULT	1	12580	0.01	0.00%	41.02%
MONEY	→ MULT + o + UNIT	1	12580	0.01	0.00%	41.02%
MONEY	→ NATIONALITY + UNIT	1	12580	0.01	0.00%	41.02%
MONEY	→ NATIONALITY + o	1	12580	0.01	0.00%	41.02%
MONEY	→ QUAL + CARDINAL	4	12580	0.03	0.00%	41.03%
MONEY	→ QUAL + CARDINAL + MULT + UNIT	1	12580	0.01	0.00%	41.03%
MONEY	→ QUAL + CARDINAL + UNIT	2	12580	0.02	0.00%	41.03%
MONEY	→ QUAL + CARDINAL + o + MONEY	1	12580	0.01	0.00%	41.03%
MONEY	→ QUAL + MONEY	1014	12580	8.06	1.09%	42.12%
MONEY	→ QUAL + MONEY + QUAL	1	12580	0.01	0.00%	42.13%
MONEY	→ QUAL + MONEY + UNIT	1	12580	0.01	0.00%	42.13%
MONEY	→ QUAL + MONEY + o + MONEY	19	12580	0.15	0.02%	42.15%
MONEY	→ QUAL + MONEY + o + MONEY + o	1	12580	0.01	0.00%	42.15%

rule	children	count	of	type %	% total	cumul've
MONEY	→ QUAL + MONEY + o + MONEY + o + MONEY	1	12580	0.01	0.00%	42.15%
MONEY	→ QUAL + MONEY + o + MONTH	2	12580	0.02	0.00%	42.15%
MONEY	→ QUAL + MONEY + o + NATIONALITY + o	1	12580	0.01	0.00%	42.15%
MONEY	→ QUAL + MONTH	5	12580	0.04	0.01%	42.16%
MONEY	→ QUAL + MONTH + o + MONEY	1	12580	0.01	0.00%	42.16%
MONEY	→ QUAL + QUAL + MONEY	1	12580	0.01	0.00%	42.16%
MONEY	→ QUAL + QUAL + MONEY + o + MONEY	1	12580	0.01	0.00%	42.16%
MONEY	→ QUAL + UNIT	1	12580	0.01	0.00%	42.16%
MONEY	→ QUAL + UNIT + CARDINAL	62	12580	0.49	0.07%	42.23%
MONEY	→ QUAL + UNIT + CARDINAL + MULT	11	12580	0.09	0.01%	42.24%
MONEY	→ QUAL + o	1	12580	0.01	0.00%	42.24%
MONEY	→ QUAL + o + MONEY	4	12580	0.03	0.00%	42.25%
MONEY	→ QUAL + o + UNIT	1	12580	0.01	0.00%	42.25%
MONEY	→ QUAL + o + UNIT + CARDINAL	1	12580	0.01	0.00%	42.25%
MONEY	→ RATE + MONEY	1	12580	0.01	0.00%	42.25%
MONEY	→ REL + MONEY	3	12580	0.02	0.00%	42.25%
MONEY	→ UNIT	33	12580	0.26	0.04%	42.29%
MONEY	→ UNIT + CARDINAL	9021	12580	71.71	9.73%	52.02%
MONEY	→ UNIT + CARDINAL + UNIT	2	12580	0.02	0.00%	52.02%
MONEY	→ UNIT + CARDINAL + o	3	12580	0.02	0.00%	52.02%
MONEY	→ UNIT + CARDINAL + o + NATIONALITY + o	1	12580	0.01	0.00%	52.02%
MONEY	→ UNIT + CARDINAL + o + UNIT + CARDINAL	2	12580	0.02	0.00%	52.03%
MONEY	→ UNIT + CARDINAL + o + UNIT + CARDINAL +	1	12580	0.01	0.00%	52.03%
	MULT					
MONEY	→ UNIT + FIRST	1	12580	0.01	0.00%	52.03%
MONEY	→ UNIT + MONEY	2	12580	0.02	0.00%	52.03%
MONEY	→ UNIT + o	4	12580	0.03	0.00%	52.04%
MONEY	→ UNIT + o + MULT	1	12580	0.01	0.00%	52.04%
MONEY	→ o + MONEY	1	12580	0.01	0.00%	52.04%
MONEY	→ o + MONEY + o + MONEY	3	12580	0.02	0.00%	52.04%
MONEY	→ o + QUAL + o + MONEY	1	12580	0.01	0.00%	52.04%
MONEY	→ o + UNIT	1	12580	0.01	0.00%	52.04%
MONTH	→ CARDINAL	1	29	3.45	0.00%	52.04%
MONTH	→ CARDINAL + MULT + UNIT	2	29	6.90	0.00%	52.05%
MONTH	→ CARDINAL + UNIT	1	29	3.45	0.00%	52.05%
MONTH	→ CITY + o + CITY + o + CORP JARGON	1	29	3.45	0.00%	52.05%
MONTH	→ DURATION	1	29	3.45	0.00%	52.05%
MONTH	→ MONEY + o + MONEY	1	29	3.45	0.00%	52.05%
MONTH	→ MONTH + o + MONEY	1	29	3.45	0.00%	52.05%

rule	children	count	of	type %	% total	cumul've
MONTH	→ MONTH + o + MONTH	1	29	3.45	0.00%	52.05%
MONTH	→ QUAL + MONEY	1	29	3.45	0.00%	52.05%
MONTH	→ QUAL + UNIT + CARDINAL + MULT	1	29	3.45	0.00%	52.05%
MONTH	→ ROLE + FIRST + NAME	3	29	10.34	0.00%	52.06%
MONTH	→ ROLE + NAME	2	29	6.90	0.00%	52.06%
MONTH	→ UNIT + CARDINAL	13	29	44.83	0.01%	52.07%
MULT	→ MULT + o + MULT	20	20	100.00	0.02%	52.10%
MUSEUM	→ CITY + o	2	12	16.67	0.00%	52.10%
MUSEUM	→ GPE + o	1	12	8.33	0.00%	52.10%
MUSEUM	→ NAME	2	12	16.67	0.00%	52.10%
MUSEUM	→ NAME + o	2	12	16.67	0.00%	52.10%
MUSEUM	→ NATIONALITY + o	1	12	8.33	0.00%	52.10%
MUSEUM	→ NORP:OTHER + CORP JARGON	1	12	8.33	0.00%	52.11%
MUSEUM	→ NORP:OTHER + o	1	12	8.33	0.00%	52.11%
MUSEUM	→ ORG:EDU + o	2	12	16.67	0.00%	52.11%
NAME	→ CORP JARGON	1	2600	0.04	0.00%	52.11%
NAME	→ FIRST	7	2600	0.27	0.01%	52.12%
NAME	→ FIRST + INI	4	2600	0.15	0.00%	52.12%
NAME	→ FIRST + INI + NAME	40	2600	1.54	0.04%	52.16%
NAME	→ FIRST + LANGUAGE	1	2600	0.04	0.00%	52.17%
NAME	→ FIRST + MIDDLE + NAME	3	2600	0.12	0.00%	52.17%
NAME	→ FIRST + NAME	280	2600	10.77	0.30%	52.47%
NAME	→ FIRST + NAME + NAME	1	2600	0.04	0.00%	52.47%
NAME	→ FIRST + o + NAME	7	2600	0.27	0.01%	52.48%
NAME	→ HON + FIRST	12	2600	0.46	0.01%	52.49%
NAME	→ HON + NAME	5	2600	0.19	0.01%	52.50%
NAME	→ HON + o + NAME	1	2600	0.04	0.00%	52.50%
NAME	→ HURRICANE + o + NAME	1	2600	0.04	0.00%	52.50%
NAME	→ INI	1	2600	0.04	0.00%	52.50%
NAME	→ INI + FIRST + NAME	3	2600	0.12	0.00%	52.50%
NAME	→ INI + MIDDLE + NAME	28	2600	1.08	0.03%	52.53%
NAME	→ INI + NAME	191	2600	7.35	0.21%	52.74%
NAME	→ INI + NAME + NAME	9	2600	0.35	0.01%	52.75%
NAME	→ INI + o + FIRST + INI + NAME	1	2600	0.04	0.00%	52.75%
NAME	→ INI + o + INI + NAME	2	2600	0.08	0.00%	52.75%
NAME	→ MONEY + o + QUANTITY:3D	1	2600	0.04	0.00%	52.75%
NAME	→ NAME	1	2600	0.04	0.00%	52.76%
NAME	→ NAME + CORP JARGON	1	2600	0.04	0.00%	52.76%
NAME	→ NAME + NAME	1144	2600	44.00	1.23%	53.99%

rule	children	count	of	type %	% total	cumul've
NAME	→ NAME + NAME + NAME	216	2600	8.31	0.23%	54.22%
NAME	→ NAME + NAME + NAME + NAME	7	2600	0.27	0.01%	54.23%
NAME	→ NAME + NAME + NAME + NAME + NAME + o + NAME	1	2600	0.04	0.00%	54.23%
NAME	→ NAME + NAME + NAME + NAME + o + NAME	3	2600	0.12	0.00%	54.24%
NAME	→ NAME + NAME + NAME + o + NAME	10	2600	0.38	0.01%	54.25%
NAME	→ NAME + NAME + o + NAME	20	2600	0.77	0.02%	54.27%
NAME	→ NAME + NAME + o + NAME + NAME	8	2600	0.31	0.01%	54.28%
NAME	→ NAME + NAME + o + NAME + o + NAME + NAME	1	2600	0.04	0.00%	54.28%
NAME	→ NAME + o + NAME	489	2600	18.81	0.53%	54.80%
NAME	→ NAME + o + NAME + NAME	2	2600	0.08	0.00%	54.81%
NAME	→ NAME + o + NAME + o + NAME	59	2600	2.27	0.06%	54.87%
NAME	→ NAME + o + NAME + o + NAME + NAME + o + NAME	1	2600	0.04	0.00%	54.87%
NAME	→ NAME + o + NAME + o + NAME + o + NAME	13	2600	0.50	0.01%	54.89%
NAME	→ NAME + o + NAME + o + NAME + o + NAME + o + NAME	6	2600	0.23	0.01%	54.89%
NAME	→ NAME + o + NAME + o + NAME + o + NAME + o + NAME + o + NAME + o + NAME + o + NAME	1	2600	0.04	0.00%	54.89%
NAME	→ NAME + o + PER	1	2600	0.04	0.00%	54.89%
NAME	→ NATIONALITY + o	1	2600	0.04	0.00%	54.90%
NAME	→ NICKNAME	2	2600	0.08	0.00%	54.90%
NAME	→ NORP:OTHER	1	2600	0.04	0.00%	54.90%
NAME	→ ROLE + FIRST	2	2600	0.08	0.00%	54.90%
NAME	→ ROLE + FIRST + NAME	3	2600	0.12	0.00%	54.90%
NAME	→ ROLE + NAME	2	2600	0.08	0.00%	54.91%
NAME	→ o + INI + NAME	1	2600	0.04	0.00%	54.91%
NAME	→ o + NAME	5	2600	0.19	0.01%	54.91%
NAMEMOD	→ CARDINAL	9	9	100.00	0.01%	54.92%
NATIONALITY	→ NATIONALITY + o + NATIONALITY	1	2	50.00	0.00%	54.92%
NATIONALITY	→ o + NATIONALITY	1	2	50.00	0.00%	54.92%
NATURAL DISASTER	→ CITY + o	1	1	100.00	0.00%	54.93%
NICKNAME	→ HON + LAW	1	14	7.14	0.00%	54.93%
NICKNAME	→ HON + MONTH	1	14	7.14	0.00%	54.93%
NICKNAME	→ ROLE + o	1	14	7.14	0.00%	54.93%
NICKNAME	→ o + FIRST	10	14	71.43	0.01%	54.94%
NICKNAME	→ o + NATIONALITY	1	14	7.14	0.00%	54.94%
NORP:OTHER	→ NATIONALITY + NATIONALITY	1	54	1.85	0.00%	54.94%

rule	children	count	of	type %	% total	cumul've
NORP:OTHER	→ NATIONALITY + NORP:OTHER	1	54	1.85	0.00%	54.94%
NORP:OTHER	→ NATIONALITY + RELIGION	1	54	1.85	0.00%	54.94%
NORP:OTHER	→ NATIONALITY + o	1	54	1.85	0.00%	54.94%
NORP:OTHER	→ OCEAN	23	54	42.59	0.02%	54.97%
NORP:OTHER	→ OCEAN + o	2	54	3.70	0.00%	54.97%
NORP:OTHER	→ o + NATIONALITY	4	54	7.41	0.00%	54.98%
NORP:OTHER	→ o + NORP:OTHER	21	54	38.89	0.02%	55.00%
NORP:POLITICAL	→ GOVERNMENT + NORP:POLITICAL	1	4	25.00	0.00%	55.00%
NORP:POLITICAL	→ NATIONALITY + o	1	4	25.00	0.00%	55.00%
NORP:POLITICAL	→ REL + o	1	4	25.00	0.00%	55.00%
NORP:POLITICAL	→ RELIGION + NORP:POLITICAL	1	4	25.00	0.00%	55.00%
NUMDAY	→ NUMDAY + o + NUMDAY	8	11	72.73	0.01%	55.01%
NUMDAY	→ NUMDAY + o + NUMDAY + o + NUMDAY	1	11	9.09	0.00%	55.01%
NUMDAY	→ NUMDAY + o + NUMDAY + o + NUMDAY + o + NUMDAY	1	11	9.09	0.00%	55.01%
NUMDAY	→ NUMDAY + o + NUMDAY + o + NUMDAY + o + NUMDAY + o + NUMDAY	1	11	9.09	0.00%	55.01%
OCEAN	→ NAME + o	1	4	25.00	0.00%	55.02%
OCEAN	→ o + COUNTRY	2	4	50.00	0.00%	55.02%
OCEAN	→ o + OCEAN	1	4	25.00	0.00%	55.02%
ORDINAL	→ MONEY + o + UNIT	1	30	3.33	0.00%	55.02%
ORDINAL	→ ORDINAL + o + ORDINAL	10	30	33.33	0.01%	55.03%
ORDINAL	→ QUAL + ORDINAL	1	30	3.33	0.00%	55.03%
ORDINAL	→ o + CARDINAL	18	30	60.00	0.02%	55.05%
ORG:CORP	→ ATTRACTION	5	14664	0.03	0.01%	55.06%
ORG:CORP	→ BOOK	2	14664	0.01	0.00%	55.06%
ORG:CORP	→ BRIDGE	1	14664	0.01	0.00%	55.06%
ORG:CORP	→ BUILDING	3	14664	0.02	0.00%	55.06%
ORG:CORP	→ BUILDING + o	1	14664	0.01	0.00%	55.06%
ORG:CORP	→ CARDINAL	1	14664	0.01	0.00%	55.07%
ORG:CORP	→ CARDINAL + CARDINAL + CARDINAL + o + CORP	1	14664	0.01	0.00%	55.07%
JARGON						
ORG:CORP	→ CARDINAL + GRP:ORG	1	14664	0.01	0.00%	55.07%
ORG:CORP	→ CARDINAL + NAME	1	14664	0.01	0.00%	55.07%
ORG:CORP	→ CARDINAL + o	1	14664	0.01	0.00%	55.07%
ORG:CORP	→ CARDINAL + o + CORP JARGON	2	14664	0.01	0.00%	55.07%
ORG:CORP	→ CHANNEL	1	14664	0.01	0.00%	55.07%
ORG:CORP	→ CITY	482	14664	3.29	0.52%	55.59%

rule	children	count	of	type %	% total	cumul've
ORG:CORP	→ CITY + CORP JARGON	13	14664	0.09	0.01%	55.61%
ORG:CORP	→ CITY + CORP JARGON + CORP JARGON + o	1	14664	0.01	0.00%	55.61%
ORG:CORP	→ CITY + CORP JARGON + o	3	14664	0.02	0.00%	55.61%
ORG:CORP	→ CITY + COUNTRY + CORP JARGON	1	14664	0.01	0.00%	55.61%
ORG:CORP	→ CITY + NAME	3	14664	0.02	0.00%	55.62%
ORG:CORP	→ CITY + NAME + CORP JARGON	4	14664	0.03	0.00%	55.62%
ORG:CORP	→ CITY + NAME + CORP JARGON + o	1	14664	0.01	0.00%	55.62%
ORG:CORP	→ CITY + OCEAN	17	14664	0.12	0.02%	55.64%
ORG:CORP	→ CITY + OCEAN + CORP JARGON	3	14664	0.02	0.00%	55.64%
ORG:CORP	→ CITY + OCEAN + o	7	14664	0.05	0.01%	55.65%
ORG:CORP	→ CITY + OCEAN + o + CORP JARGON	1	14664	0.01	0.00%	55.65%
ORG:CORP	→ CITY + REGION + CORP JARGON	1	14664	0.01	0.00%	55.65%
ORG:CORP	→ CITY + o	465	14664	3.17	0.50%	56.15%
ORG:CORP	→ CITY + o + CITY + o + CORP JARGON	2	14664	0.01	0.00%	56.16%
ORG:CORP	→ CITY + o + CORP JARGON	52	14664	0.35	0.06%	56.21%
ORG:CORP	→ CITY + o + CORP JARGON + CORP JARGON	1	14664	0.01	0.00%	56.21%
ORG:CORP	→ CITY + o + CORP JARGON + o	3	14664	0.02	0.00%	56.22%
ORG:CORP	→ CITY + o + CORP JARGON + o + CONTINENT + o + CORP JARGON	1	14664	0.01	0.00%	56.22%
ORG:CORP	→ CITY + o + NORP:OTHER	6	14664	0.04	0.01%	56.22%
ORG:CORP	→ CITY + o + NORP:OTHER + o + CORP JARGON + o	1	14664	0.01	0.00%	56.23%
ORG:CORP	→ CITY + o + OCEAN	1	14664	0.01	0.00%	56.23%
ORG:CORP	→ CITY + o + OCEAN + CORP JARGON	1	14664	0.01	0.00%	56.23%
ORG:CORP	→ CITY + o + REGION + o + CORP JARGON	1	14664	0.01	0.00%	56.23%
ORG:CORP	→ CONTINENT + CORP JARGON	1	14664	0.01	0.00%	56.23%
ORG:CORP	→ CONTINENT + o	4	14664	0.03	0.00%	56.23%
ORG:CORP	→ CONTINENT + o + CORP JARGON	1	14664	0.01	0.00%	56.23%
ORG:CORP	→ CONTINENT + o + CORP JARGON + o	1	14664	0.01	0.00%	56.24%
ORG:CORP	→ CORP JARGON + NAME	2	14664	0.01	0.00%	56.24%
ORG:CORP	→ CORP JARGON + o	9	14664	0.06	0.01%	56.25%
ORG:CORP	→ CORP JARGON + o + CITY	1	14664	0.01	0.00%	56.25%
ORG:CORP	→ COUNTRY	5	14664	0.03	0.01%	56.25%
ORG:CORP	→ COUNTRY + NORP:OTHER + o	1	14664	0.01	0.00%	56.26%
ORG:CORP	→ COUNTRY + ORDINAL + o + CORP JARGON	1	14664	0.01	0.00%	56.26%
ORG:CORP	→ COUNTRY + o	40	14664	0.27	0.04%	56.30%
ORG:CORP	→ COUNTRY + o + CARDINAL	1	14664	0.01	0.00%	56.30%
ORG:CORP	→ COUNTRY + o + CORP JARGON	8	14664	0.05	0.01%	56.31%
ORG:CORP	→ COUNTRY + o + CORP JARGON + o	1	14664	0.01	0.00%	56.31%

rule	children	count	of	type %	% total	cumul've
ORG:CORP	→ COUNTRY + o + CORP JARGON + o + COUNTRY	1	14664	0.01	0.00%	56.31%
	+ o					
ORG:CORP	→ FIRST	4	14664	0.03	0.00%	56.32%
ORG:CORP	→ FIRST + INI + NAME	3	14664	0.02	0.00%	56.32%
ORG:CORP	→ FIRST + INI + NAME + CORP JARGON	2	14664	0.01	0.00%	56.32%
ORG:CORP	→ FIRST + NAME	6	14664	0.04	0.01%	56.33%
ORG:CORP	→ FIRST + NAME + o	1	14664	0.01	0.00%	56.33%
ORG:CORP	→ FIRST + NAME + o + CORP JARGON	1	14664	0.01	0.00%	56.33%
ORG:CORP	→ FIRST + NAME + o + REGION + o + CORP JARGON	1	14664	0.01	0.00%	56.33%
ORG:CORP	→ FIRST + o	4	14664	0.03	0.00%	56.34%
ORG:CORP	→ FIRST + o + CORP JARGON	3	14664	0.02	0.00%	56.34%
ORG:CORP	→ FIRST + o + NORP:OTHER + o + CORP JARGON	1	14664	0.01	0.00%	56.34%
ORG:CORP	→ FUND + CORP JARGON	1	14664	0.01	0.00%	56.34%
ORG:CORP	→ GOD + CORP JARGON	2	14664	0.01	0.00%	56.34%
ORG:CORP	→ GOVERNMENT + o + CORP JARGON + o	1	14664	0.01	0.00%	56.34%
ORG:CORP	→ GPE	2	14664	0.01	0.00%	56.35%
ORG:CORP	→ GPE + o	3	14664	0.02	0.00%	56.35%
ORG:CORP	→ GPE + o + CORP JARGON	7	14664	0.05	0.01%	56.36%
ORG:CORP	→ GPE + o + CORP JARGON + o	4	14664	0.03	0.00%	56.36%
ORG:CORP	→ GRP:LOC	1	14664	0.01	0.00%	56.36%
ORG:CORP	→ GRP:LOC + o + CORP JARGON	1	14664	0.01	0.00%	56.36%
ORG:CORP	→ GRP:ORG + o	2	14664	0.01	0.00%	56.37%
ORG:CORP	→ GRP:PER	5	14664	0.03	0.01%	56.37%
ORG:CORP	→ GRP:PER + CORP JARGON	3	14664	0.02	0.00%	56.37%
ORG:CORP	→ HOTEL	11	14664	0.08	0.01%	56.39%
ORG:CORP	→ HURRICANE + CORP JARGON	1	14664	0.01	0.00%	56.39%
ORG:CORP	→ INI	1	14664	0.01	0.00%	56.39%
ORG:CORP	→ INI + NAME	1	14664	0.01	0.00%	56.39%
ORG:CORP	→ INI + NAME + CORP JARGON	1	14664	0.01	0.00%	56.39%
ORG:CORP	→ INI + NAME + o + CORP JARGON	2	14664	0.01	0.00%	56.39%
ORG:CORP	→ INI + o	5	14664	0.03	0.01%	56.40%
ORG:CORP	→ INI + o + CORP JARGON	4	14664	0.03	0.00%	56.40%
ORG:CORP	→ LOCATION:OTHER	13	14664	0.09	0.01%	56.42%
ORG:CORP	→ LOCATION:OTHER + CORP JARGON	3	14664	0.02	0.00%	56.42%
ORG:CORP	→ LOCATION:OTHER + o	9	14664	0.06	0.01%	56.43%
ORG:CORP	→ LOCATION:OTHER + o + CORP JARGON + o	2	14664	0.01	0.00%	56.43%
ORG:CORP	→ LOCATION:OTHER + o + STATE	1	14664	0.01	0.00%	56.43%
ORG:CORP	→ MEDIA	274	14664	1.87	0.30%	56.73%
ORG:CORP	→ MEDIA + CORP JARGON	43	14664	0.29	0.05%	56.77%

rule	children	count	of	type %	% total	cumul've
ORG:CORP	→ MEDIA + CORP JARGON + o	1	14664	0.01	0.00%	56.78%
ORG:CORP	→ MEDIA + NAME	29	14664	0.20	0.03%	56.81%
ORG:CORP	→ MEDIA + NAME + CORP JARGON	15	14664	0.10	0.02%	56.82%
ORG:CORP	→ MEDIA + o	13	14664	0.09	0.01%	56.84%
ORG:CORP	→ MEDIA + o + CORP JARGON	11	14664	0.08	0.01%	56.85%
ORG:CORP	→ MUSEUM	3	14664	0.02	0.00%	56.85%
ORG:CORP	→ NAME	5001	14664	34.10	5.39%	62.25%
ORG:CORP	→ NAME + CITY	1	14664	0.01	0.00%	62.25%
ORG:CORP	→ NAME + CITY + CORP JARGON	2	14664	0.01	0.00%	62.25%
ORG:CORP	→ NAME + CONTINENT	1	14664	0.01	0.00%	62.25%
ORG:CORP	→ NAME + CONTINENT + CORP JARGON	2	14664	0.01	0.00%	62.25%
ORG:CORP	→ NAME + CONTINENT + CORP JARGON + o	4	14664	0.03	0.00%	62.26%
ORG:CORP	→ NAME + CONTINENT + o + CORP JARGON	1	14664	0.01	0.00%	62.26%
ORG:CORP	→ NAME + CORP JARGON	909	14664	6.20	0.98%	63.24%
ORG:CORP	→ NAME + CORP JARGON + CORP JARGON	13	14664	0.09	0.01%	63.25%
ORG:CORP	→ NAME + CORP JARGON + o	61	14664	0.42	0.07%	63.32%
ORG:CORP	→ NAME + CORP JARGON + o + CITY + o	1	14664	0.01	0.00%	63.32%
ORG:CORP	→ NAME + CORP JARGON + o + CORP JARGON	4	14664	0.03	0.00%	63.32%
ORG:CORP	→ NAME + CORP JARGON + o + COUNTRY	1	14664	0.01	0.00%	63.32%
ORG:CORP	→ NAME + CORP JARGON + o + COUNTRY + o	1	14664	0.01	0.00%	63.32%
ORG:CORP	→ NAME + COUNTRY	14	14664	0.10	0.02%	63.34%
ORG:CORP	→ NAME + COUNTRY + CORP JARGON	6	14664	0.04	0.01%	63.35%
ORG:CORP	→ NAME + GPE	2	14664	0.01	0.00%	63.35%
ORG:CORP	→ NAME + GPE + CORP JARGON	3	14664	0.02	0.00%	63.35%
ORG:CORP	→ NAME + GPE + o	6	14664	0.04	0.01%	63.36%
ORG:CORP	→ NAME + GPE + o + CORP JARGON	1	14664	0.01	0.00%	63.36%
ORG:CORP	→ NAME + NAME	11	14664	0.08	0.01%	63.37%
ORG:CORP	→ NAME + NAME + CORP JARGON	2	14664	0.01	0.00%	63.37%
ORG:CORP	→ NAME + NAME + NAME	1	14664	0.01	0.00%	63.37%
ORG:CORP	→ NAME + NAME + NAME + CORP JARGON	3	14664	0.02	0.00%	63.38%
ORG:CORP	→ NAME + NAME + o	1	14664	0.01	0.00%	63.38%
ORG:CORP	→ NAME + NAME + o + CORP JARGON	2	14664	0.01	0.00%	63.38%
ORG:CORP	→ NAME + NATIONALITY	1	14664	0.01	0.00%	63.38%
ORG:CORP	→ NAME + NATIONALITY + o + CORP JARGON	1	14664	0.01	0.00%	63.38%
ORG:CORP	→ NAME + OCEAN	12	14664	0.08	0.01%	63.40%
ORG:CORP	→ NAME + OCEAN + CORP JARGON	4	14664	0.03	0.00%	63.40%
ORG:CORP	→ NAME + OCEAN + o	1	14664	0.01	0.00%	63.40%
ORG:CORP	→ NAME + OCEAN + o + CORP JARGON	1	14664	0.01	0.00%	63.40%
ORG:CORP	→ NAME + ORG:CORP	4	14664	0.03	0.00%	63.41%

rule	children	count	of	type %	% total	cumul've
ORG:CORP	→ NAME + REGION	2	14664	0.01	0.00%	63.41%
ORG:CORP	→ NAME + STATE + CORP JARGON	1	14664	0.01	0.00%	63.41%
ORG:CORP	→ NAME + STATE + o + CORP JARGON	2	14664	0.01	0.00%	63.41%
ORG:CORP	→ NAME + STREET	11	14664	0.08	0.01%	63.42%
ORG:CORP	→ NAME + o	1219	14664	8.31	1.31%	64.74%
ORG:CORP	→ NAME + o + CARDINAL + CORP JARGON	1	14664	0.01	0.00%	64.74%
ORG:CORP	→ NAME + o + CITY	7	14664	0.05	0.01%	64.75%
ORG:CORP	→ NAME + o + CITY + CORP JARGON	1	14664	0.01	0.00%	64.75%
ORG:CORP	→ NAME + o + CITY + o	1	14664	0.01	0.00%	64.75%
ORG:CORP	→ NAME + o + CITY + o + CORP JARGON	1	14664	0.01	0.00%	64.75%
ORG:CORP	→ NAME + o + CONTINENT	3	14664	0.02	0.00%	64.75%
ORG:CORP	→ NAME + o + CONTINENT + CORP JARGON	2	14664	0.01	0.00%	64.76%
ORG:CORP	→ NAME + o + CONTINENT + CORP JARGON + o	2	14664	0.01	0.00%	64.76%
ORG:CORP	→ NAME + o + CONTINENT + o + CORP JARGON	1	14664	0.01	0.00%	64.76%
ORG:CORP	→ NAME + o + CORP JARGON	1139	14664	7.77	1.23%	65.99%
ORG:CORP	→ NAME + o + CORP JARGON + CORP JARGON	7	14664	0.05	0.01%	66.00%
ORG:CORP	→ NAME + o + CORP JARGON + CORP JARGON + o	1	14664	0.01	0.00%	66.00%
ORG:CORP	→ NAME + o + CORP JARGON + o	137	14664	0.93	0.15%	66.14%
ORG:CORP	→ NAME + o + CORP JARGON + o + CORP JARGON	2	14664	0.01	0.00%	66.15%
ORG:CORP	→ NAME + o + CORP JARGON + o + COUNTRY	5	14664	0.03	0.01%	66.15%
ORG:CORP	→ NAME + o + CORP JARGON + o + COUNTRY + o	6	14664	0.04	0.01%	66.16%
ORG:CORP	→ NAME + o + CORP JARGON + o + COUNTRY + o + ORG:CORP	1	14664	0.01	0.00%	66.16%
ORG:CORP	→ NAME + o + CORP JARGON + o + NATIONALITY + o	1	14664	0.01	0.00%	66.16%
ORG:CORP	→ NAME + o + CORP JARGON + o + STATE	1	14664	0.01	0.00%	66.16%
ORG:CORP	→ NAME + o + COUNTRY	11	14664	0.08	0.01%	66.17%
ORG:CORP	→ NAME + o + COUNTRY + CORP JARGON	3	14664	0.02	0.00%	66.18%
ORG:CORP	→ NAME + o + COUNTRY + CORP JARGON + o	2	14664	0.01	0.00%	66.18%
ORG:CORP	→ NAME + o + COUNTRY + o	3	14664	0.02	0.00%	66.18%
ORG:CORP	→ NAME + o + COUNTRY + o + CORP JARGON	17	14664	0.12	0.02%	66.20%
ORG:CORP	→ NAME + o + GOVERNMENT	1	14664	0.01	0.00%	66.20%
ORG:CORP	→ NAME + o + GPE + o + CORP JARGON	1	14664	0.01	0.00%	66.20%
ORG:CORP	→ NAME + o + LOCATION:OTHER	1	14664	0.01	0.00%	66.20%
ORG:CORP	→ NAME + o + NAME	20	14664	0.14	0.02%	66.22%
ORG:CORP	→ NAME + o + NAME + CORP JARGON	9	14664	0.06	0.01%	66.23%
ORG:CORP	→ NAME + o + NAME + CORP JARGON + o	2	14664	0.01	0.00%	66.24%
ORG:CORP	→ NAME + o + NAME + o	2	14664	0.01	0.00%	66.24%
ORG:CORP	→ NAME + o + NAME + o + CORP JARGON	38	14664	0.26	0.04%	66.28%

rule	children	count	of	type %	% total	cumul've
ORG:CORP	→ NAME + o + NAME + o + CORP JARGON + CORP JARGON	1	14664	0.01	0.00%	66.28%
ORG:CORP	→ NAME + o + NAME + o + CORP JARGON + o	4	14664	0.03	0.00%	66.29%
ORG:CORP	→ NAME + o + NAME + o + NAME	10	14664	0.07	0.01%	66.30%
ORG:CORP	→ NAME + o + NAME + o + NAME + CORP JARGON	2	14664	0.01	0.00%	66.30%
ORG:CORP	→ NAME + o + NAME + o + NAME + o + CORP JARGON	2	14664	0.01	0.00%	66.30%
ORG:CORP	→ NAME + o + NAME + o + NAME + o + NAME	1	14664	0.01	0.00%	66.30%
ORG:CORP	→ NAME + o + NAME + o + NAME + o + NAME + CORP JARGON	1	14664	0.01	0.00%	66.30%
ORG:CORP	→ NAME + o + REGION + o + CORP JARGON	2	14664	0.01	0.00%	66.30%
ORG:CORP	→ NAME + o + STATE	1	14664	0.01	0.00%	66.31%
ORG:CORP	→ NAME + o + STATE + o	1	14664	0.01	0.00%	66.31%
ORG:CORP	→ NATIONALITY	14	14664	0.10	0.02%	66.32%
ORG:CORP	→ NATIONALITY + CORP JARGON	1	14664	0.01	0.00%	66.32%
ORG:CORP	→ NATIONALITY + NAME	1	14664	0.01	0.00%	66.32%
ORG:CORP	→ NATIONALITY + NAME + CORP JARGON	2	14664	0.01	0.00%	66.33%
ORG:CORP	→ NATIONALITY + NAME + o + CORP JARGON	3	14664	0.02	0.00%	66.33%
ORG:CORP	→ NATIONALITY + OCEAN	8	14664	0.05	0.01%	66.34%
ORG:CORP	→ NATIONALITY + OCEAN + CORP JARGON	4	14664	0.03	0.00%	66.34%
ORG:CORP	→ NATIONALITY + ORG:CORP	1	14664	0.01	0.00%	66.34%
ORG:CORP	→ NATIONALITY + o	371	14664	2.53	0.40%	66.74%
ORG:CORP	→ NATIONALITY + o + CITY	2	14664	0.01	0.00%	66.75%
ORG:CORP	→ NATIONALITY + o + CORP JARGON	124	14664	0.85	0.13%	66.88%
ORG:CORP	→ NATIONALITY + o + CORP JARGON + CORP JARGON	3	14664	0.02	0.00%	66.88%
ORG:CORP	→ NATIONALITY + o + CORP JARGON + o	4	14664	0.03	0.00%	66.89%
ORG:CORP	→ NICKNAME + o + CORP JARGON	1	14664	0.01	0.00%	66.89%
ORG:CORP	→ NORP:OTHER	6	14664	0.04	0.01%	66.89%
ORG:CORP	→ NORP:OTHER + CORP JARGON	11	14664	0.08	0.01%	66.91%
ORG:CORP	→ NORP:OTHER + COUNTRY + o + CORP JARGON	1	14664	0.01	0.00%	66.91%
ORG:CORP	→ NORP:OTHER + NATIONALITY + CORP JARGON	1	14664	0.01	0.00%	66.91%
ORG:CORP	→ NORP:OTHER + NATIONALITY + CORP JARGON + o + COUNTRY + CORP JARGON	1	14664	0.01	0.00%	66.91%
ORG:CORP	→ NORP:OTHER + o	32	14664	0.22	0.03%	66.94%
ORG:CORP	→ NORP:OTHER + o + CORP JARGON	8	14664	0.05	0.01%	66.95%
ORG:CORP	→ NORP:OTHER + o + COUNTRY + o	1	14664	0.01	0.00%	66.95%
ORG:CORP	→ NORP:POLITICAL	1	14664	0.01	0.00%	66.95%

rule	children	count	of	type %	% total	cumul've
ORG:CORP	→ OCEAN	6	14664	0.04	0.01%	66.96%
ORG:CORP	→ OCEAN + COUNTRY	3	14664	0.02	0.00%	66.96%
ORG:CORP	→ OCEAN + COUNTRY + o + CORP JARGON	1	14664	0.01	0.00%	66.97%
ORG:CORP	→ OCEAN + NAME	6	14664	0.04	0.01%	66.97%
ORG:CORP	→ OCEAN + NAME + CORP JARGON	2	14664	0.01	0.00%	66.97%
ORG:CORP	→ OCEAN + NAME + o + CORP JARGON	1	14664	0.01	0.00%	66.98%
ORG:CORP	→ OCEAN + ORDINAL	2	14664	0.01	0.00%	66.98%
ORG:CORP	→ OCEAN + ORDINAL + o	1	14664	0.01	0.00%	66.98%
ORG:CORP	→ OCEAN + ORDINAL + o + CORP JARGON	2	14664	0.01	0.00%	66.98%
ORG:CORP	→ OCEAN + PERIODIC + o	1	14664	0.01	0.00%	66.98%
ORG:CORP	→ OCEAN + o	31	14664	0.21	0.03%	67.02%
ORG:CORP	→ OCEAN + o + CORP JARGON	15	14664	0.10	0.02%	67.03%
ORG:CORP	→ ORDINAL + CITY	45	14664	0.31	0.05%	67.08%
ORG:CORP	→ ORDINAL + CITY + CORP JARGON	45	14664	0.31	0.05%	67.13%
ORG:CORP	→ ORDINAL + CITY + CORP JARGON + o	7	14664	0.05	0.01%	67.14%
ORG:CORP	→ ORDINAL + CITY + o	2	14664	0.01	0.00%	67.14%
ORG:CORP	→ ORDINAL + CITY + o + CORP JARGON	1	14664	0.01	0.00%	67.14%
ORG:CORP	→ ORDINAL + CITY + o + COUNTRY + o + CORP JARGON	1	14664	0.01	0.00%	67.14%
ORG:CORP	→ ORDINAL + DURATION + o	1	14664	0.01	0.00%	67.14%
ORG:CORP	→ ORDINAL + GPE + CORP JARGON	1	14664	0.01	0.00%	67.14%
ORG:CORP	→ ORDINAL + GPE + CORP JARGON + o	1	14664	0.01	0.00%	67.14%
ORG:CORP	→ ORDINAL + NAME	1	14664	0.01	0.00%	67.14%
ORG:CORP	→ ORDINAL + NAME + o	1	14664	0.01	0.00%	67.15%
ORG:CORP	→ ORDINAL + NATIONALITY + o + CORP JARGON	1	14664	0.01	0.00%	67.15%
ORG:CORP	→ ORDINAL + NORP:OTHER + o	1	14664	0.01	0.00%	67.15%
ORG:CORP	→ ORDINAL + REGION + CORP JARGON	1	14664	0.01	0.00%	67.15%
ORG:CORP	→ ORDINAL + REGION + o + CORP JARGON + o	1	14664	0.01	0.00%	67.15%
ORG:CORP	→ ORDINAL + STATE	4	14664	0.03	0.00%	67.15%
ORG:CORP	→ ORDINAL + STATE + o	2	14664	0.01	0.00%	67.16%
ORG:CORP	→ ORDINAL + STATE + o + CORP JARGON	1	14664	0.01	0.00%	67.16%
ORG:CORP	→ ORDINAL + o	76	14664	0.52	0.08%	67.24%
ORG:CORP	→ ORDINAL + o + CITY	7	14664	0.05	0.01%	67.25%
ORG:CORP	→ ORDINAL + o + CORP JARGON	16	14664	0.11	0.02%	67.26%
ORG:CORP	→ ORDINAL + o + CORP JARGON + o	1	14664	0.01	0.00%	67.27%
ORG:CORP	→ ORDINAL + o + CORP JARGON + o + STATE	1	14664	0.01	0.00%	67.27%
ORG:CORP	→ ORDINAL + o + COUNTRY	6	14664	0.04	0.01%	67.27%
ORG:CORP	→ ORDINAL + o + COUNTRY + o + CORP JARGON	1	14664	0.01	0.00%	67.27%
ORG:CORP	→ ORDINAL + o + STATE	4	14664	0.03	0.00%	67.28%

rule	children	count	of	type %	% total	cumul've
ORG:CORP	→ ORG:CORP	1	14664	0.01	0.00%	67.28%
ORG:CORP	→ ORG:CORP + CORP JARGON	1	14664	0.01	0.00%	67.28%
ORG:CORP	→ ORG:CORP + CORP JARGON + o	1	14664	0.01	0.00%	67.28%
ORG:CORP	→ ORG:CORP + COUNTRY	3	14664	0.02	0.00%	67.29%
ORG:CORP	→ ORG:CORP + COUNTRY + CORP JARGON	1	14664	0.01	0.00%	67.29%
ORG:CORP	→ ORG:CORP + DATE + o	1	14664	0.01	0.00%	67.29%
ORG:CORP	→ ORG:CORP + ORG:CORP + o + CORP JARGON	1	14664	0.01	0.00%	67.29%
ORG:CORP	→ ORG:CORP + o	45	14664	0.31	0.05%	67.34%
ORG:CORP	→ ORG:CORP + o + CITY	1	14664	0.01	0.00%	67.34%
ORG:CORP	→ ORG:CORP + o + CITY + o + STATE	1	14664	0.01	0.00%	67.34%
ORG:CORP	→ ORG:CORP + o + CONTINENT	1	14664	0.01	0.00%	67.34%
ORG:CORP	→ ORG:CORP + o + CONTINENT + CORP JARGON	1	14664	0.01	0.00%	67.34%
ORG:CORP	→ ORG:CORP + o + CORP JARGON	10	14664	0.07	0.01%	67.35%
ORG:CORP	→ ORG:CORP + o + CORP JARGON + CORP JARGON	1	14664	0.01	0.00%	67.35%
ORG:CORP	→ ORG:CORP + o + CORP JARGON + o	2	14664	0.01	0.00%	67.36%
ORG:CORP	→ ORG:CORP + o + COUNTRY + CORP JARGON	1	14664	0.01	0.00%	67.36%
ORG:CORP	→ ORG:CORP + o + GPE	1	14664	0.01	0.00%	67.36%
ORG:CORP	→ ORG:CORP + o + NATIONALITY + o	1	14664	0.01	0.00%	67.36%
ORG:CORP	→ ORG:CORP + o + STATE	1	14664	0.01	0.00%	67.36%
ORG:CORP	→ ORG:EDU + o	2	14664	0.01	0.00%	67.36%
ORG:CORP	→ PRODUCT:FOOD	4	14664	0.03	0.00%	67.37%
ORG:CORP	→ PRODUCT:OTHER	1	14664	0.01	0.00%	67.37%
ORG:CORP	→ REGION	33	14664	0.23	0.04%	67.40%
ORG:CORP	→ REGION + CORP JARGON	5	14664	0.03	0.01%	67.41%
ORG:CORP	→ REGION + NAME	3	14664	0.02	0.00%	67.41%
ORG:CORP	→ REGION + NAME + CORP JARGON	3	14664	0.02	0.00%	67.41%
ORG:CORP	→ REGION + o	49	14664	0.33	0.05%	67.47%
ORG:CORP	→ REGION + o + CORP JARGON	14	14664	0.10	0.02%	67.48%
ORG:CORP	→ REGION + o + CORP JARGON + o	3	14664	0.02	0.00%	67.49%
ORG:CORP	→ REGION + o + NAME	1	14664	0.01	0.00%	67.49%
ORG:CORP	→ RELIGION + o + CORP JARGON	1	14664	0.01	0.00%	67.49%
ORG:CORP	→ RIVER	5	14664	0.03	0.01%	67.49%
ORG:CORP	→ RIVER + CORP JARGON	2	14664	0.01	0.00%	67.50%
ORG:CORP	→ RIVER + o	1	14664	0.01	0.00%	67.50%
ORG:CORP	→ RIVER + o + RIVER + o	1	14664	0.01	0.00%	67.50%
ORG:CORP	→ SPORTS EVENT	2	14664	0.01	0.00%	67.50%
ORG:CORP	→ STADIUM + o	2	14664	0.01	0.00%	67.50%
ORG:CORP	→ STATE	11	14664	0.08	0.01%	67.51%
ORG:CORP	→ STATE + CORP JARGON	4	14664	0.03	0.00%	67.52%

rule	children	count	of	type %	% total	cumul've
ORG:CORP	→ STATE + NAME	2	14664	0.01	0.00%	67.52%
ORG:CORP	→ STATE + NATIONALITY	4	14664	0.03	0.00%	67.52%
ORG:CORP	→ STATE + NATIONALITY + CORP JARGON	1	14664	0.01	0.00%	67.53%
ORG:CORP	→ STATE + NATIONALITY + o + CORP JARGON + o	1	14664	0.01	0.00%	67.53%
ORG:CORP	→ STATE + OCEAN	4	14664	0.03	0.00%	67.53%
ORG:CORP	→ STATE + OCEAN + CORP JARGON	1	14664	0.01	0.00%	67.53%
ORG:CORP	→ STATE + ORDINAL	1	14664	0.01	0.00%	67.53%
ORG:CORP	→ STATE + o	149	14664	1.02	0.16%	67.69%
ORG:CORP	→ STATE + o + CORP JARGON	40	14664	0.27	0.04%	67.74%
ORG:CORP	→ STATE + o + CORP JARGON + o	6	14664	0.04	0.01%	67.74%
ORG:CORP	→ STATE + o + COUNTRY + CORP JARGON	1	14664	0.01	0.00%	67.74%
ORG:CORP	→ STATE + o + COUNTRY + o	1	14664	0.01	0.00%	67.75%
ORG:CORP	→ STATE + o + STATE + CORP JARGON	1	14664	0.01	0.00%	67.75%
ORG:CORP	→ STREET	5	14664	0.03	0.01%	67.75%
ORG:CORP	→ SUBURB + o + CORP JARGON	1	14664	0.01	0.00%	67.75%
ORG:CORP	→ VEHICLE	2	14664	0.01	0.00%	67.76%
ORG:CORP	→ o + CARDINAL	13	14664	0.09	0.01%	67.77%
ORG:CORP	→ o + CARDINAL + CORP JARGON	5	14664	0.03	0.01%	67.77%
ORG:CORP	→ o + CARDINAL + STATE + CORP JARGON	1	14664	0.01	0.00%	67.78%
ORG:CORP	→ o + CARDINAL + o	1	14664	0.01	0.00%	67.78%
ORG:CORP	→ o + CARDINAL + o + STATE + CONTINENT	1	14664	0.01	0.00%	67.78%
ORG:CORP	→ o + CHEMICAL	1	14664	0.01	0.00%	67.78%
ORG:CORP	→ o + CITY	47	14664	0.32	0.05%	67.83%
ORG:CORP	→ o + CITY + CORP JARGON	18	14664	0.12	0.02%	67.85%
ORG:CORP	→ o + CITY + CORP JARGON + o	1	14664	0.01	0.00%	67.85%
ORG:CORP	→ o + CITY + GPE	1	14664	0.01	0.00%	67.85%
ORG:CORP	→ o + CITY + o	4	14664	0.03	0.00%	67.86%
ORG:CORP	→ o + CITY + o + CORP JARGON	2	14664	0.01	0.00%	67.86%
ORG:CORP	→ o + CONTINENT	4	14664	0.03	0.00%	67.86%
ORG:CORP	→ o + CONTINENT + CORP JARGON	1	14664	0.01	0.00%	67.86%
ORG:CORP	→ o + CONTINENT + o + CORP JARGON	1	14664	0.01	0.00%	67.86%
ORG:CORP	→ o + CONTINENT + o + CORP JARGON + o	2	14664	0.01	0.00%	67.87%
ORG:CORP	→ o + CORP JARGON	2002	14664	13.65	2.16%	70.03%
ORG:CORP	→ o + CORP JARGON + CORP JARGON	16	14664	0.11	0.02%	70.04%
ORG:CORP	→ o + CORP JARGON + o	151	14664	1.03	0.16%	70.21%
ORG:CORP	→ o + CORP JARGON + o + CITY	2	14664	0.01	0.00%	70.21%
ORG:CORP	→ o + CORP JARGON + o + CORP JARGON	1	14664	0.01	0.00%	70.21%
ORG:CORP	→ o + CORP JARGON + o + COUNTRY	13	14664	0.09	0.01%	70.22%
ORG:CORP	→ o + CORP JARGON + o + COUNTRY + o	1	14664	0.01	0.00%	70.22%

rule	children	count	of	type %	% total	cumul've
ORG:CORP	→ o + CORP JARGON + o + ORG:CORP	1	14664	0.01	0.00%	70.22%
ORG:CORP	→ o + CORP JARGON + o + STATE	3	14664	0.02	0.00%	70.23%
ORG:CORP	→ o + COUNTRY	128	14664	0.87	0.14%	70.37%
ORG:CORP	→ o + COUNTRY + CORP JARGON	30	14664	0.20	0.03%	70.40%
ORG:CORP	→ o + COUNTRY + CORP JARGON + o	5	14664	0.03	0.01%	70.40%
ORG:CORP	→ o + COUNTRY + o	2	14664	0.01	0.00%	70.41%
ORG:CORP	→ o + COUNTRY + o + CORP JARGON	5	14664	0.03	0.01%	70.41%
ORG:CORP	→ o + COUNTRY + o + CORP JARGON + o	1	14664	0.01	0.00%	70.41%
ORG:CORP	→ o + DURATION	2	14664	0.01	0.00%	70.41%
ORG:CORP	→ o + FIRST + CORP JARGON + o	1	14664	0.01	0.00%	70.42%
ORG:CORP	→ o + GPE	5	14664	0.03	0.01%	70.42%
ORG:CORP	→ o + GPE + CORP JARGON	6	14664	0.04	0.01%	70.43%
ORG:CORP	→ o + GPE + o + CORP JARGON + o	1	14664	0.01	0.00%	70.43%
ORG:CORP	→ o + GRP:LOC + o + CORP JARGON	1	14664	0.01	0.00%	70.43%
ORG:CORP	→ o + LAST	1	14664	0.01	0.00%	70.43%
ORG:CORP	→ o + NAME	76	14664	0.52	0.08%	70.51%
ORG:CORP	→ o + NAME + CORP JARGON	21	14664	0.14	0.02%	70.54%
ORG:CORP	→ o + NAME + CORP JARGON + o	3	14664	0.02	0.00%	70.54%
ORG:CORP	→ o + NAME + CORP JARGON + o + COUNTRY	1	14664	0.01	0.00%	70.54%
ORG:CORP	→ o + NAME + NAME + CORP JARGON	1	14664	0.01	0.00%	70.54%
ORG:CORP	→ o + NAME + o	43	14664	0.29	0.05%	70.59%
ORG:CORP	→ o + NAME + o + CORP JARGON	11	14664	0.08	0.01%	70.60%
ORG:CORP	→ o + NAME + o + CORP JARGON + o	2	14664	0.01	0.00%	70.60%
ORG:CORP	→ o + NAME + o + JARGON	24	14664	0.16	0.03%	70.63%
ORG:CORP	→ o + NATIONALITY	24	14664	0.16	0.03%	70.65%
ORG:CORP	→ o + NATIONALITY + CITY	1	14664	0.01	0.00%	70.65%
ORG:CORP	→ o + NATIONALITY + CORP JARGON	2	14664	0.01	0.00%	70.66%
ORG:CORP	→ o + NATIONALITY + LOCATION:OTHER + o	1	14664	0.01	0.00%	70.66%
ORG:CORP	→ o + NATIONALITY + ORDINAL + CITY + CORP JARGON	1	14664	0.01	0.00%	70.66%
ORG:CORP	→ o + NATIONALITY + ORDINAL + CITY + CORP JARGON + o	1	14664	0.01	0.00%	70.66%
ORG:CORP	→ o + NATIONALITY + o	12	14664	0.08	0.01%	70.67%
ORG:CORP	→ o + NATIONALITY + o + CORP JARGON	2	14664	0.01	0.00%	70.67%
ORG:CORP	→ o + NATIONALITY + o + GPE + CORP JARGON + o	1	14664	0.01	0.00%	70.68%
ORG:CORP	→ o + NORP:OTHER	10	14664	0.07	0.01%	70.69%
ORG:CORP	→ o + NORP:OTHER + CORP JARGON	1	14664	0.01	0.00%	70.69%

rule	children	count	of	type %	% total	cumul've
ORG:CORP	→ o + NORP:OTHER + COUNTRY + CORP JARGON	1	14664	0.01	0.00%	70.69%
ORG:CORP	→ o + NORP:OTHER + COUNTRY + CORP JARGON	1	14664	0.01	0.00%	70.69%
	+ o					
ORG:CORP	→ o + NORP:OTHER + o	4	14664	0.03	0.00%	70.69%
ORG:CORP	→ o + NORP:OTHER + o + CORP JARGON	1	14664	0.01	0.00%	70.70%
ORG:CORP	→ o + OCEAN	16	14664	0.11	0.02%	70.71%
ORG:CORP	→ o + OCEAN + CORP JARGON	11	14664	0.08	0.01%	70.72%
ORG:CORP	→ o + OCEAN + CORP JARGON + o	2	14664	0.01	0.00%	70.73%
ORG:CORP	→ o + OCEAN + o	5	14664	0.03	0.01%	70.73%
ORG:CORP	→ o + OCEAN + o + CORP JARGON	2	14664	0.01	0.00%	70.73%
ORG:CORP	→ o + OCEAN + o + OCEAN + o	1	14664	0.01	0.00%	70.74%
ORG:CORP	→ o + ORDINAL	2	14664	0.01	0.00%	70.74%
ORG:CORP	→ o + ORDINAL + CITY	11	14664	0.08	0.01%	70.75%
ORG:CORP	→ o + ORDINAL + CITY + CORP JARGON	5	14664	0.03	0.01%	70.75%
ORG:CORP	→ o + ORDINAL + CITY + o	1	14664	0.01	0.00%	70.76%
ORG:CORP	→ o + ORDINAL + NAME + CORP JARGON	1	14664	0.01	0.00%	70.76%
ORG:CORP	→ o + ORDINAL + o	3	14664	0.02	0.00%	70.76%
ORG:CORP	→ o + ORDINAL + o + CORP JARGON	1	14664	0.01	0.00%	70.76%
ORG:CORP	→ o + ORDINAL + o + CORP JARGON + CORP JAR-	1	14664	0.01	0.00%	70.76%
	GON					
ORG:CORP	→ o + ORG:CORP + CORP JARGON + o	1	14664	0.01	0.00%	70.76%
ORG:CORP	→ o + PER	1	14664	0.01	0.00%	70.76%
ORG:CORP	→ o + PER + CORP JARGON	1	14664	0.01	0.00%	70.77%
ORG:CORP	→ o + REGION	20	14664	0.14	0.02%	70.79%
ORG:CORP	→ o + REGION + CORP JARGON	5	14664	0.03	0.01%	70.79%
ORG:CORP	→ o + REGION + CORP JARGON + CORP JARGON	1	14664	0.01	0.00%	70.79%
ORG:CORP	→ o + REGION + o	2	14664	0.01	0.00%	70.80%
ORG:CORP	→ o + REGION + o + CORP JARGON	4	14664	0.03	0.00%	70.80%
ORG:CORP	→ o + STATE	42	14664	0.29	0.05%	70.85%
ORG:CORP	→ o + STATE + CORP JARGON	3	14664	0.02	0.00%	70.85%
ORG:CORP	→ o + STATE + o	11	14664	0.08	0.01%	70.86%
ORG:CORP	→ o + STATE + o + CORP JARGON	1	14664	0.01	0.00%	70.86%
ORG:CORP	→ o + UNIT	3	14664	0.02	0.00%	70.86%
ORG:CORP	→ o + UNIT + CORP JARGON	1	14664	0.01	0.00%	70.87%
ORG:CORP	→ o + UNIT + o + COUNTRY	1	14664	0.01	0.00%	70.87%
ORG:EDU	→ CITY	10	330	3.03	0.01%	70.88%
ORG:EDU	→ CITY + o	27	330	8.18	0.03%	70.91%
ORG:EDU	→ CITY + o + STATE + o	1	330	0.30	0.00%	70.91%
ORG:EDU	→ GPE	3	330	0.91	0.00%	70.91%

rule	children	count	of	type %	% total	cumul've
ORG:EDU	→ GPE + o	2	330	0.61	0.00%	70.91%
ORG:EDU	→ NAME	62	330	18.79	0.07%	70.98%
ORG:EDU	→ NAME + CORP JARGON	1	330	0.30	0.00%	70.98%
ORG:EDU	→ NAME + o	73	330	22.12	0.08%	71.06%
ORG:EDU	→ NATIONALITY + o	2	330	0.61	0.00%	71.06%
ORG:EDU	→ ORG:CORP + o	1	330	0.30	0.00%	71.06%
ORG:EDU	→ ORG:CORP + o + CITY	2	330	0.61	0.00%	71.07%
ORG:EDU	→ ORG:EDU + CITY	1	330	0.30	0.00%	71.07%
ORG:EDU	→ ORG:EDU + o	19	330	5.76	0.02%	71.09%
ORG:EDU	→ ORG:EDU + o + CITY	1	330	0.30	0.00%	71.09%
ORG:EDU	→ ORG:EDU + o + NAME + o	1	330	0.30	0.00%	71.09%
ORG:EDU	→ REGION + RELIGION + o	1	330	0.30	0.00%	71.09%
ORG:EDU	→ REGION + o	1	330	0.30	0.00%	71.09%
ORG:EDU	→ STATE	5	330	1.52	0.01%	71.10%
ORG:EDU	→ STATE + o	32	330	9.70	0.03%	71.13%
ORG:EDU	→ o + CITY	22	330	6.67	0.02%	71.15%
ORG:EDU	→ o + CORP JARGON	4	330	1.21	0.00%	71.16%
ORG:EDU	→ o + GPE + o	1	330	0.30	0.00%	71.16%
ORG:EDU	→ o + NATIONALITY	1	330	0.30	0.00%	71.16%
ORG:EDU	→ o + NATIONALITY + o	1	330	0.30	0.00%	71.16%
ORG:EDU	→ o + REGION	3	330	0.91	0.00%	71.17%
ORG:EDU	→ o + RELIGION + o	1	330	0.30	0.00%	71.17%
ORG:EDU	→ o + STATE	50	330	15.15	0.05%	71.22%
ORG:EDU	→ o + STATE + o + CITY	2	330	0.61	0.00%	71.22%
ORG:OTHER	→ BUILDING	1	316	0.32	0.00%	71.22%
ORG:OTHER	→ CARDINAL + o + CARDINAL	1	316	0.32	0.00%	71.22%
ORG:OTHER	→ CITY	3	316	0.95	0.00%	71.23%
ORG:OTHER	→ CITY + o	40	316	12.66	0.04%	71.27%
ORG:OTHER	→ CITY + o + COUNTRY	1	316	0.32	0.00%	71.27%
ORG:OTHER	→ CORP JARGON + o + NORP:OTHER + o	1	316	0.32	0.00%	71.27%
ORG:OTHER	→ COUNTRY + o	13	316	4.11	0.01%	71.29%
ORG:OTHER	→ DISEASE + o	1	316	0.32	0.00%	71.29%
ORG:OTHER	→ EVENT + o	1	316	0.32	0.00%	71.29%
ORG:OTHER	→ GOVERNMENT + o	1	316	0.32	0.00%	71.29%
ORG:OTHER	→ GRP:LOC + o	2	316	0.63	0.00%	71.29%
ORG:OTHER	→ HURRICANE + o	1	316	0.32	0.00%	71.29%
ORG:OTHER	→ LOCATION:OTHER + o	1	316	0.32	0.00%	71.29%
ORG:OTHER	→ MEDIA	6	316	1.90	0.01%	71.30%
ORG:OTHER	→ NAME	18	316	5.70	0.02%	71.32%

rule	children	count	of	type %	% total	cumul've
ORG:OTHER	→ NAME + CORP JARGON	1	316	0.32	0.00%	71.32%
ORG:OTHER	→ NAME + CORP JARGON + CORP JARGON	1	316	0.32	0.00%	71.32%
ORG:OTHER	→ NAME + o	38	316	12.03	0.04%	71.36%
ORG:OTHER	→ NAME + o + CORP JARGON	3	316	0.95	0.00%	71.37%
ORG:OTHER	→ NATIONALITY + CORP JARGON	1	316	0.32	0.00%	71.37%
ORG:OTHER	→ NATIONALITY + ORG:OTHER	1	316	0.32	0.00%	71.37%
ORG:OTHER	→ NATIONALITY + o	65	316	20.57	0.07%	71.44%
ORG:OTHER	→ NATIONALITY + o + CORP JARGON	1	316	0.32	0.00%	71.44%
ORG:OTHER	→ NATIONALITY + o + DISEASE + o	1	316	0.32	0.00%	71.44%
ORG:OTHER	→ NORP:OTHER + o	12	316	3.80	0.01%	71.45%
ORG:OTHER	→ ORG:EDU + o	1	316	0.32	0.00%	71.46%
ORG:OTHER	→ ORG:OTHER + CITY + o + STATE	1	316	0.32	0.00%	71.46%
ORG:OTHER	→ ORG:OTHER + o	6	316	1.90	0.01%	71.46%
ORG:OTHER	→ PER + o + PER	1	316	0.32	0.00%	71.46%
ORG:OTHER	→ REGION + o	4	316	1.27	0.00%	71.47%
ORG:OTHER	→ RIVER + o	1	316	0.32	0.00%	71.47%
ORG:OTHER	→ STATE	1	316	0.32	0.00%	71.47%
ORG:OTHER	→ STATE + o	19	316	6.01	0.02%	71.49%
ORG:OTHER	→ WAR + o	1	316	0.32	0.00%	71.49%
ORG:OTHER	→ o + CARDINAL	6	316	1.90	0.01%	71.50%
ORG:OTHER	→ o + CITY	5	316	1.58	0.01%	71.50%
ORG:OTHER	→ o + CITY + o	2	316	0.63	0.00%	71.51%
ORG:OTHER	→ o + CONTINENT	1	316	0.32	0.00%	71.51%
ORG:OTHER	→ o + CORP JARGON	11	316	3.48	0.01%	71.52%
ORG:OTHER	→ o + CORP JARGON + o	1	316	0.32	0.00%	71.52%
ORG:OTHER	→ o + COUNTRY	17	316	5.38	0.02%	71.54%
ORG:OTHER	→ o + COUNTRY + o	1	316	0.32	0.00%	71.54%
ORG:OTHER	→ o + DISEASE + o	3	316	0.95	0.00%	71.54%
ORG:OTHER	→ o + FILM	1	316	0.32	0.00%	71.54%
ORG:OTHER	→ o + NAME	1	316	0.32	0.00%	71.55%
ORG:OTHER	→ o + NAME + o	1	316	0.32	0.00%	71.55%
ORG:OTHER	→ o + NATIONALITY	1	316	0.32	0.00%	71.55%
ORG:OTHER	→ o + NATIONALITY + o	6	316	1.90	0.01%	71.55%
ORG:OTHER	→ o + NORP:OTHER + o	4	316	1.27	0.00%	71.56%
ORG:OTHER	→ o + OCEAN + o	2	316	0.63	0.00%	71.56%
ORG:OTHER	→ o + SPORTS EVENT + o	1	316	0.32	0.00%	71.56%
ORG:OTHER	→ o + STATE	1	316	0.32	0.00%	71.56%
ORG:OTHER	→ o + STATE + o	1	316	0.32	0.00%	71.56%
ORG:POLITICAL	→ CITY	1	74	1.35	0.00%	71.56%

rule	children	count	of	type %	% total	cumul've
ORG:POLITICAL	→ COUNTRY + o	1	74	1.35	0.00%	71.57%
ORG:POLITICAL	→ GPE + o	1	74	1.35	0.00%	71.57%
ORG:POLITICAL	→ NAME + NORP:POLITICAL + o	1	74	1.35	0.00%	71.57%
ORG:POLITICAL	→ NATIONALITY + NORP:POLITICAL + o	3	74	4.05	0.00%	71.57%
ORG:POLITICAL	→ NATIONALITY + o	2	74	2.70	0.00%	71.57%
ORG:POLITICAL	→ NORP:OTHER + o	32	74	43.24	0.03%	71.61%
ORG:POLITICAL	→ NORP:POLITICAL + o	26	74	35.14	0.03%	71.64%
ORG:POLITICAL	→ RELIGION + NORP:POLITICAL + o	2	74	2.70	0.00%	71.64%
ORG:POLITICAL	→ STATE + NORP:POLITICAL + o	1	74	1.35	0.00%	71.64%
ORG:POLITICAL	→ o + NATIONALITY	2	74	2.70	0.00%	71.64%
ORG:POLITICAL	→ o + NORP:OTHER + o	2	74	2.70	0.00%	71.64%
ORG:RELIGIOUS	→ BUILDING	6	25	24.00	0.01%	71.65%
ORG:RELIGIOUS	→ GPE + o	1	25	4.00	0.00%	71.65%
ORG:RELIGIOUS	→ NAME	1	25	4.00	0.00%	71.65%
ORG:RELIGIOUS	→ NAME + o	5	25	20.00	0.01%	71.66%
ORG:RELIGIOUS	→ NATIONALITY + o	1	25	4.00	0.00%	71.66%
ORG:RELIGIOUS	→ NORP:OTHER + o	1	25	4.00	0.00%	71.66%
ORG:RELIGIOUS	→ ORG:RELIGIOUS + o	1	25	4.00	0.00%	71.66%
ORG:RELIGIOUS	→ PER + o	1	25	4.00	0.00%	71.66%
ORG:RELIGIOUS	→ RELIGION + o	4	25	16.00	0.00%	71.67%
ORG:RELIGIOUS	→ RELIGION + o + COUNTRY	1	25	4.00	0.00%	71.67%
ORG:RELIGIOUS	→ SUBURB + o	1	25	4.00	0.00%	71.67%
ORG:RELIGIOUS	→ o + COUNTRY	1	25	4.00	0.00%	71.67%
ORG:RELIGIOUS	→ o + PER + o	1	25	4.00	0.00%	71.67%
PAINTING	→ FIRST + o + FIRST	1	6	16.67	0.00%	71.67%
PAINTING	→ FIRST + o + FIRST + o	1	6	16.67	0.00%	71.67%
PAINTING	→ NAME	1	6	16.67	0.00%	71.67%
PAINTING	→ o + CARDINAL	1	6	16.67	0.00%	71.67%
PAINTING	→ o + FIRST + o	1	6	16.67	0.00%	71.68%
PAINTING	→ o + NATIONALITY + o	1	6	16.67	0.00%	71.68%
PER	→ CARDINAL + UNIT	1	14911	0.01	0.00%	71.68%
PER	→ CARDINAL + UNIT + QUAL	1	14911	0.01	0.00%	71.68%
PER	→ FIRST	239	14911	1.60	0.26%	71.94%
PER	→ FIRST + ANIMATE	1	14911	0.01	0.00%	71.94%
PER	→ FIRST + DURATION	1	14911	0.01	0.00%	71.94%
PER	→ FIRST + FIRST + NAME	4	14911	0.03	0.00%	71.94%
PER	→ FIRST + GOVERNMENT	1	14911	0.01	0.00%	71.94%
PER	→ FIRST + INI + NAME	839	14911	5.63	0.90%	72.85%
PER	→ FIRST + INI + NAME + NAMEMOD	76	14911	0.51	0.08%	72.93%

rule	children	count	of	type %	% total	cumul've
PER	→ FIRST + INI + NAME + o + NAMEMOD	1	14911	0.01	0.00%	72.93%
PER	→ FIRST + INI + o + NICKNAME + o + NAME	4	14911	0.03	0.00%	72.94%
PER	→ FIRST + MIDDLE	2	14911	0.01	0.00%	72.94%
PER	→ FIRST + MIDDLE + LANGUAGE	3	14911	0.02	0.00%	72.94%
PER	→ FIRST + MIDDLE + NAME	162	14911	1.09	0.17%	73.12%
PER	→ FIRST + MIDDLE + NAME + NAME	1	14911	0.01	0.00%	73.12%
PER	→ FIRST + MIDDLE + NAME + NAMEMOD	5	14911	0.03	0.01%	73.12%
PER	→ FIRST + NAME	4572	14911	30.66	4.93%	78.05%
PER	→ FIRST + NAME + NAME	2	14911	0.01	0.00%	78.06%
PER	→ FIRST + NAME + NAMEMOD	40	14911	0.27	0.04%	78.10%
PER	→ FIRST + NAME + NAMEMOD + o	1	14911	0.01	0.00%	78.10%
PER	→ FIRST + NAME + o	1	14911	0.01	0.00%	78.10%
PER	→ FIRST + NAMEMOD	7	14911	0.05	0.01%	78.11%
PER	→ FIRST + NICKNAME	1	14911	0.01	0.00%	78.11%
PER	→ FIRST + REL	1	14911	0.01	0.00%	78.11%
PER	→ FIRST + o + NAME	7	14911	0.05	0.01%	78.12%
PER	→ FIRST + o + NAME + o	2	14911	0.01	0.00%	78.12%
PER	→ FIRST + o + NICKNAME + o + NAME	5	14911	0.03	0.01%	78.13%
PER	→ GRP:ORG + PER	2	14911	0.01	0.00%	78.13%
PER	→ HON	6	14911	0.04	0.01%	78.13%
PER	→ HON + FIRST	55	14911	0.37	0.06%	78.19%
PER	→ HON + FIRST + HON	1	14911	0.01	0.00%	78.20%
PER	→ HON + FIRST + INI + NAME	1	14911	0.01	0.00%	78.20%
PER	→ HON + FIRST + NAME	38	14911	0.25	0.04%	78.24%
PER	→ HON + FIRST + NAMEMOD	1	14911	0.01	0.00%	78.24%
PER	→ HON + FIRST + o + NAME	1	14911	0.01	0.00%	78.24%
PER	→ HON + INI	2	14911	0.01	0.00%	78.24%
PER	→ HON + MIDDLE + NAME	13	14911	0.09	0.01%	78.26%
PER	→ HON + NAME	5367	14911	35.99	5.79%	84.04%
PER	→ HON + ROLE	1	14911	0.01	0.00%	84.04%
PER	→ HON + o + NAME	2	14911	0.01	0.00%	84.05%
PER	→ INI	6	14911	0.04	0.01%	84.05%
PER	→ INI + FIRST + LANGUAGE	1	14911	0.01	0.00%	84.05%
PER	→ INI + FIRST + NAME	5	14911	0.03	0.01%	84.06%
PER	→ INI + FIRST + NAME + NAMEMOD	1	14911	0.01	0.00%	84.06%
PER	→ INI + MIDDLE + LANGUAGE	1	14911	0.01	0.00%	84.06%
PER	→ INI + MIDDLE + NAME	72	14911	0.48	0.08%	84.14%
PER	→ INI + MIDDLE + NAME + NAMEMOD	7	14911	0.05	0.01%	84.15%
PER	→ INI + MIDDLE + NAME + NAMEMOD + o	1	14911	0.01	0.00%	84.15%

rule	children	count	of	type %	% total	cumul've
PER	→ INI + NAME	39	14911	0.26	0.04%	84.19%
PER	→ INI + NAME + NAME	4	14911	0.03	0.00%	84.19%
PER	→ INI + NAME + NAMEMOD	5	14911	0.03	0.01%	84.20%
PER	→ INI + o + NICKNAME + o + NAME	4	14911	0.03	0.00%	84.20%
PER	→ INI + o + NICKNAME + o + NAME + NAMEMOD	1	14911	0.01	0.00%	84.21%
PER	→ MIDDLE	1	14911	0.01	0.00%	84.21%
PER	→ MONTH	1	14911	0.01	0.00%	84.21%
PER	→ MONTH + FIRST + NAME	1	14911	0.01	0.00%	84.21%
PER	→ NAME	1686	14911	11.31	1.82%	86.03%
PER	→ NAME + FIRST	23	14911	0.15	0.02%	86.05%
PER	→ NAME + FIRST + MIDDLE	1	14911	0.01	0.00%	86.05%
PER	→ NAME + NAME	1	14911	0.01	0.00%	86.05%
PER	→ NAME + o + NICKNAME + o	1	14911	0.01	0.00%	86.06%
PER	→ NICKNAME	47	14911	0.32	0.05%	86.11%
PER	→ NICKNAME + NAME	3	14911	0.02	0.00%	86.11%
PER	→ NICKNAME + o + NAME	1	14911	0.01	0.00%	86.11%
PER	→ ORG:CORP	1	14911	0.01	0.00%	86.11%
PER	→ ORG:EDU + o + ROLE + o + PER	1	14911	0.01	0.00%	86.11%
PER	→ PER + ROLE	4	14911	0.03	0.00%	86.12%
PER	→ PER + o + NORP:POLITICAL + o + STATE + o +	1	14911	0.01	0.00%	86.12%
	PER + o + NORP:POLITICAL + o + STATE + o					
PER	→ PER + o + PER	5	14911	0.03	0.01%	86.12%
PER	→ PRODUCT:DRUG + FIRST + NAME	3	14911	0.02	0.00%	86.13%
PER	→ ROLE	7	14911	0.05	0.01%	86.13%
PER	→ ROLE + CARDINAL	1	14911	0.01	0.00%	86.13%
PER	→ ROLE + FIRST	12	14911	0.08	0.01%	86.15%
PER	→ ROLE + FIRST + INI + NAME	54	14911	0.36	0.06%	86.21%
PER	→ ROLE + FIRST + INI + NAME + NAMEMOD	4	14911	0.03	0.00%	86.21%
PER	→ ROLE + FIRST + MIDDLE + NAME	9	14911	0.06	0.01%	86.22%
PER	→ ROLE + FIRST + NAME + NAMEMOD	3	14911	0.02	0.00%	86.22%
PER	→ ROLE + FIRST + o + NICKNAME + o + NAME	4	14911	0.03	0.00%	86.23%
PER	→ ROLE + HON + NAME	2	14911	0.01	0.00%	86.23%
PER	→ ROLE + INI + FIRST + NAME	1	14911	0.01	0.00%	86.23%
PER	→ ROLE + INI + MIDDLE + NAME	4	14911	0.03	0.00%	86.24%
PER	→ ROLE + INI + NAME	3	14911	0.02	0.00%	86.24%
PER	→ ROLE + INI + o + FIRST + o + NAME	1	14911	0.01	0.00%	86.24%
PER	→ ROLE + NAME + FIRST + MIDDLE	3	14911	0.02	0.00%	86.24%
PER	→ ROLE + PER	1391	14911	9.33	1.50%	87.74%

rule	children	count	of	type %	% total	cumul've
PER	→ ROLE + PER + o + NORP:POLITICAL + o + STATE	1	14911	0.01	0.00%	87.74%
	+ o + PER + o + NORP:POLITICAL + o + STATE + o					
PER	→ ROLE + PER + o + PER	1	14911	0.01	0.00%	87.75%
PER	→ ROLE + PER + o + PER + o + PER	1	14911	0.01	0.00%	87.75%
PER	→ ROLE + ROLE + NAME	1	14911	0.01	0.00%	87.75%
PER	→ ROLE + ROLE + PER	1	14911	0.01	0.00%	87.75%
PER	→ ROLE + o + CITY	1	14911	0.01	0.00%	87.75%
PER	→ ROLE + o + PER	2	14911	0.01	0.00%	87.75%
PER	→ SEASON + FIRST + NAME	1	14911	0.01	0.00%	87.75%
PER	→ o + FIRST + o + NAME	1	14911	0.01	0.00%	87.75%
PER	→ o + NAME	1	14911	0.01	0.00%	87.75%
PER	→ o + NATIONALITY	1	14911	0.01	0.00%	87.76%
PER	→ o + NICKNAME + o + NAME	1	14911	0.01	0.00%	87.76%
PER	→ o + ROLE + o + HON + NAME	1	14911	0.01	0.00%	87.76%
PERCENT	→ CARDINAL	15	6510	0.23	0.02%	87.77%
PERCENT	→ CARDINAL + CARDINAL + UNIT	1	6510	0.02	0.00%	87.78%
PERCENT	→ CARDINAL + PERCENT	3	6510	0.05	0.00%	87.78%
PERCENT	→ CARDINAL + TIME + o + CARDINAL + UNIT	1	6510	0.02	0.00%	87.78%
PERCENT	→ CARDINAL + UNIT	6038	6510	92.75	6.51%	94.29%
PERCENT	→ CARDINAL + UNIT + QUAL	1	6510	0.02	0.00%	94.29%
PERCENT	→ CARDINAL + UNIT + o + CARDINAL + UNIT	4	6510	0.06	0.00%	94.30%
PERCENT	→ CARDINAL + UNIT + o + PERCENT + UNIT	1	6510	0.02	0.00%	94.30%
PERCENT	→ CARDINAL + UNIT + o + QUAL	1	6510	0.02	0.00%	94.30%
PERCENT	→ CARDINAL + o + CARDINAL	1	6510	0.02	0.00%	94.30%
PERCENT	→ CARDINAL + o + UNIT	16	6510	0.25	0.02%	94.32%
PERCENT	→ CARDINAL + o + UNIT + QUAL	1	6510	0.02	0.00%	94.32%
PERCENT	→ CITY + UNIT	1	6510	0.02	0.00%	94.32%
PERCENT	→ FIRST + UNIT	3	6510	0.05	0.00%	94.32%
PERCENT	→ PERCENT + QUAL	16	6510	0.25	0.02%	94.34%
PERCENT	→ PERCENT + o + PER	1	6510	0.02	0.00%	94.34%
PERCENT	→ PERCENT + o + PERCENT	189	6510	2.90	0.20%	94.54%
PERCENT	→ PERCENT + o + QUAL	2	6510	0.03	0.00%	94.55%
PERCENT	→ QUAL + CARDINAL + UNIT	133	6510	2.04	0.14%	94.69%
PERCENT	→ QUAL + PERCENT	58	6510	0.89	0.06%	94.75%
PERCENT	→ QUAL + PERCENT + o + PERCENT	9	6510	0.14	0.01%	94.76%
PERCENT	→ QUAL + o + CARDINAL + UNIT	3	6510	0.05	0.00%	94.77%
PERCENT	→ QUAL + o + PERCENT	2	6510	0.03	0.00%	94.77%
PERCENT	→ UNIT	1	6510	0.02	0.00%	94.77%
PERCENT	→ UNIT + CARDINAL	3	6510	0.05	0.00%	94.77%

rule	children	count	of	type %	% total	cumul've
PERCENT	→ o + UNIT	6	6510	0.09	0.01%	94.78%
PERIODIC	→ CARDINAL + DURATION	1	175	0.57	0.00%	94.78%
PERIODIC	→ CARDINAL + DURATION + o + DURATION	2	175	1.14	0.00%	94.78%
PERIODIC	→ CARDINAL + PERIODIC	1	175	0.57	0.00%	94.78%
PERIODIC	→ CARDINAL + o + DURATION	1	175	0.57	0.00%	94.78%
PERIODIC	→ DATE + DURATION	1	175	0.57	0.00%	94.79%
PERIODIC	→ DATE + PERIODIC	4	175	2.29	0.00%	94.79%
PERIODIC	→ DATE + o + DATE	1	175	0.57	0.00%	94.79%
PERIODIC	→ DAY	11	175	6.29	0.01%	94.80%
PERIODIC	→ DAY + DURATION	4	175	2.29	0.00%	94.81%
PERIODIC	→ DAY + o	1	175	0.57	0.00%	94.81%
PERIODIC	→ DAY + o + TIME	1	175	0.57	0.00%	94.81%
PERIODIC	→ DURATION	3	175	1.71	0.00%	94.81%
PERIODIC	→ DURATION + DURATION	1	175	0.57	0.00%	94.81%
PERIODIC	→ DURATION + o	2	175	1.14	0.00%	94.82%
PERIODIC	→ DURATION + o + DATE	1	175	0.57	0.00%	94.82%
PERIODIC	→ DURATION + o + DURATION	9	175	5.14	0.01%	94.83%
PERIODIC	→ EVENT	2	175	1.14	0.00%	94.83%
PERIODIC	→ MONTH + NUMDAY + o + DATE + o + DATE + o	1	175	0.57	0.00%	94.83%
	+ DATE					
PERIODIC	→ ORDINAL + DURATION	1	175	0.57	0.00%	94.83%
PERIODIC	→ ORDINAL + DURATION + o + PERIODIC	1	175	0.57	0.00%	94.83%
PERIODIC	→ ORDINAL + o + PERIODIC	4	175	2.29	0.00%	94.84%
PERIODIC	→ PERIODIC + QUAL	1	175	0.57	0.00%	94.84%
PERIODIC	→ PERIODIC + SEASON	1	175	0.57	0.00%	94.84%
PERIODIC	→ QUAL + PERIODIC	4	175	2.29	0.00%	94.84%
PERIODIC	→ QUAL + o + DAY	1	175	0.57	0.00%	94.84%
PERIODIC	→ RATE + o + DATE	1	175	0.57	0.00%	94.84%
PERIODIC	→ RATE + o + DURATION	1	175	0.57	0.00%	94.85%
PERIODIC	→ REL + PERIODIC	1	175	0.57	0.00%	94.85%
PERIODIC	→ REL + o + PERIODIC	3	175	1.71	0.00%	94.85%
PERIODIC	→ TIME + PERIODIC	1	175	0.57	0.00%	94.85%
PERIODIC	→ o + DATE	7	175	4.00	0.01%	94.86%
PERIODIC	→ o + DAY	1	175	0.57	0.00%	94.86%
PERIODIC	→ o + DAY + DURATION	1	175	0.57	0.00%	94.86%
PERIODIC	→ o + DURATION	93	175	53.14	0.10%	94.96%
PERIODIC	→ o + DURATION + o + DURATION	2	175	1.14	0.00%	94.96%
PERIODIC	→ o + DURATION + o + MONTH	1	175	0.57	0.00%	94.96%
PERIODIC	→ o + ORG:EDU	1	175	0.57	0.00%	94.97%

rule	children	count	of	type %	% total	cumul've
PERIODIC	→ o + PERIODIC	1	175	0.57	0.00%	94.97%
PERIODIC	→ o + SEASON	1	175	0.57	0.00%	94.97%
PLAY	→ ORDINAL + o	1	5	20.00	0.00%	94.97%
PLAY	→ REGION	1	5	20.00	0.00%	94.97%
PLAY	→ o + CITY + o	1	5	20.00	0.00%	94.97%
PLAY	→ o + EVENT + o	1	5	20.00	0.00%	94.97%
PLAY	→ o + PER + o	1	5	20.00	0.00%	94.97%
POINTS	→ CARDINAL + CARDINAL	1	24	4.17	0.00%	94.97%
POINTS	→ CARDINAL + COUNTRY	1	24	4.17	0.00%	94.98%
POINTS	→ CARDINAL + IPOINTS	1	24	4.17	0.00%	94.98%
POINTS	→ CARDINAL + UNIT	20	24	83.33	0.02%	95.00%
POINTS	→ CARDINAL + o	1	24	4.17	0.00%	95.00%
PRODUCT:DRUG	→ ORG:CORP + ROLE	1	2	50.00	0.00%	95.00%
PRODUCT:DRUG	→ ROLE + FIRST + NAME	1	2	50.00	0.00%	95.00%
PRODUCT:FOOD	→ CARDINAL + o	1	5	20.00	0.00%	95.00%
PRODUCT:FOOD	→ ORG:CORP + o	3	5	60.00	0.00%	95.01%
PRODUCT:FOOD	→ o + NAME	1	5	20.00	0.00%	95.01%
PRODUCT:OTHER	→ ANIMATE	1	161	0.62	0.00%	95.01%
PRODUCT:OTHER	→ CARDINAL	2	161	1.24	0.00%	95.01%
PRODUCT:OTHER	→ CARDINAL + o	3	161	1.86	0.00%	95.01%
PRODUCT:OTHER	→ COUNTRY + ORDINAL + o	1	161	0.62	0.00%	95.01%
PRODUCT:OTHER	→ COUNTRY + o	3	161	1.86	0.00%	95.02%
PRODUCT:OTHER	→ DATE + NAME + o	1	161	0.62	0.00%	95.02%
PRODUCT:OTHER	→ DURATION + o	2	161	1.24	0.00%	95.02%
PRODUCT:OTHER	→ FIRST	1	161	0.62	0.00%	95.02%
PRODUCT:OTHER	→ GOVERNMENT	5	161	3.11	0.01%	95.03%
PRODUCT:OTHER	→ GOVERNMENT + o	3	161	1.86	0.00%	95.03%
PRODUCT:OTHER	→ GPE + o	1	161	0.62	0.00%	95.03%
PRODUCT:OTHER	→ HURRICANE	1	161	0.62	0.00%	95.03%
PRODUCT:OTHER	→ LOCATION:OTHER	21	161	13.04	0.02%	95.06%
PRODUCT:OTHER	→ LOCATION:OTHER + LOCATION:OTHER	2	161	1.24	0.00%	95.06%
PRODUCT:OTHER	→ NAME	22	161	13.66	0.02%	95.08%
PRODUCT:OTHER	→ NAME + LOCATION:OTHER	2	161	1.24	0.00%	95.08%
PRODUCT:OTHER	→ NAME + LOCATION:OTHER + o	1	161	0.62	0.00%	95.08%
PRODUCT:OTHER	→ NAME + o	12	161	7.45	0.01%	95.10%
PRODUCT:OTHER	→ NAME + o + LOCATION:OTHER	1	161	0.62	0.00%	95.10%
PRODUCT:OTHER	→ NAME + o + LOCATION:OTHER + o	1	161	0.62	0.00%	95.10%
PRODUCT:OTHER	→ NATIONALITY + o	1	161	0.62	0.00%	95.10%
PRODUCT:OTHER	→ NORP:OTHER	1	161	0.62	0.00%	95.10%

rule	children	count	of	type %	% total	cumul've
PRODUCT:OTHER	→ NORP:OTHER + o	2	161	1.24	0.00%	95.10%
PRODUCT:OTHER	→ ORG:CORP	4	161	2.48	0.00%	95.11%
PRODUCT:OTHER	→ ORG:CORP + CARDINAL	2	161	1.24	0.00%	95.11%
PRODUCT:OTHER	→ ORG:CORP + o	10	161	6.21	0.01%	95.12%
PRODUCT:OTHER	→ ORG:CORP + o + CARDINAL	3	161	1.86	0.00%	95.12%
PRODUCT:OTHER	→ ORG:CORP + o + UNIT	1	161	0.62	0.00%	95.13%
PRODUCT:OTHER	→ ORG:EDU + o	1	161	0.62	0.00%	95.13%
PRODUCT:OTHER	→ ORG:OTHER + o	1	161	0.62	0.00%	95.13%
PRODUCT:OTHER	→ PER + o + CARDINAL	1	161	0.62	0.00%	95.13%
PRODUCT:OTHER	→ REGION	2	161	1.24	0.00%	95.13%
PRODUCT:OTHER	→ REGION + o	10	161	6.21	0.01%	95.14%
PRODUCT:OTHER	→ STATE	2	161	1.24	0.00%	95.14%
PRODUCT:OTHER	→ STATE + o	4	161	2.48	0.00%	95.15%
PRODUCT:OTHER	→ TV SHOW	1	161	0.62	0.00%	95.15%
PRODUCT:OTHER	→ o + CARDINAL	18	161	11.18	0.02%	95.17%
PRODUCT:OTHER	→ o + CARDINAL + o	1	161	0.62	0.00%	95.17%
PRODUCT:OTHER	→ o + CONTINENT	1	161	0.62	0.00%	95.17%
PRODUCT:OTHER	→ o + COUNTRY	1	161	0.62	0.00%	95.17%
PRODUCT:OTHER	→ o + NAME	1	161	0.62	0.00%	95.17%
PRODUCT:OTHER	→ o + ORDINAL + NAME	1	161	0.62	0.00%	95.17%
PRODUCT:OTHER	→ o + ORDINAL + ORG:CORP	3	161	1.86	0.00%	95.18%
PRODUCT:OTHER	→ o + ORDINAL + o	1	161	0.62	0.00%	95.18%
PRODUCT:OTHER	→ o + UNIT + o	2	161	1.24	0.00%	95.18%
QUAL	→ CARDINAL + UNIT + QUAL	1	6	16.67	0.00%	95.18%
QUAL	→ QUAL + CARDINAL	1	6	16.67	0.00%	95.18%
QUAL	→ QUAL + o + QUAL	1	6	16.67	0.00%	95.18%
QUAL	→ o + QUAL	3	6	50.00	0.00%	95.19%
QUANTITY:1D	→ CARDINAL	3	156	1.92	0.00%	95.19%
QUANTITY:1D	→ CARDINAL + COUNTRY	1	156	0.64	0.00%	95.19%
QUANTITY:1D	→ CARDINAL + DURATION	1	156	0.64	0.00%	95.19%
QUANTITY:1D	→ CARDINAL + INI	1	156	0.64	0.00%	95.19%
QUANTITY:1D	→ CARDINAL + MULT + UNIT	1	156	0.64	0.00%	95.19%
QUANTITY:1D	→ CARDINAL + QUAL + UNIT	1	156	0.64	0.00%	95.20%
QUANTITY:1D	→ CARDINAL + QUANTITY:1D	2	156	1.28	0.00%	95.20%
QUANTITY:1D	→ CARDINAL + UNIT	116	156	74.36	0.13%	95.32%
QUANTITY:1D	→ CARDINAL + o	2	156	1.28	0.00%	95.32%
QUANTITY:1D	→ CARDINAL + o + CARDINAL + UNIT	1	156	0.64	0.00%	95.33%
QUANTITY:1D	→ CARDINAL + o + UNIT	7	156	4.49	0.01%	95.33%
QUANTITY:1D	→ QUAL + CARDINAL + UNIT	1	156	0.64	0.00%	95.33%

rule	children	count	of	type %	% total	cumul've
QUANTITY:1D	→ QUAL + QUANTITY:1D	1	156	0.64	0.00%	95.34%
QUANTITY:1D	→ QUANTITY:1D + o + QUANTITY:1D	2	156	1.28	0.00%	95.34%
QUANTITY:1D	→ UNIT	15	156	9.62	0.02%	95.35%
QUANTITY:1D	→ o + DURATION	1	156	0.64	0.00%	95.35%
QUANTITY:2D	→ CARDINAL	1	54	1.85	0.00%	95.36%
QUANTITY:2D	→ CARDINAL + CARDINAL	1	54	1.85	0.00%	95.36%
QUANTITY:2D	→ CARDINAL + MULT + UNIT	4	54	7.41	0.00%	95.36%
QUANTITY:2D	→ CARDINAL + UNIT	35	54	64.81	0.04%	95.40%
QUANTITY:2D	→ CARDINAL + UNIT + o + CARDINAL + UNIT	1	54	1.85	0.00%	95.40%
QUANTITY:2D	→ CARDINAL + o + CARDINAL + UNIT	1	54	1.85	0.00%	95.40%
QUANTITY:2D	→ CARDINAL + o + UNIT	6	54	11.11	0.01%	95.41%
QUANTITY:2D	→ QUANTITY:1D + o + QUANTITY:1D	1	54	1.85	0.00%	95.41%
QUANTITY:2D	→ QUANTITY:2D + QUAL	1	54	1.85	0.00%	95.41%
QUANTITY:2D	→ UNIT	3	54	5.56	0.00%	95.41%
QUANTITY:3D	→ CARDINAL + MULT + UNIT	17	143	11.89	0.02%	95.43%
QUANTITY:3D	→ CARDINAL + UNIT	82	143	57.34	0.09%	95.52%
QUANTITY:3D	→ CARDINAL + WEIGHT + UNIT	1	143	0.70	0.00%	95.52%
QUANTITY:3D	→ CARDINAL + o + CARDINAL + UNIT	1	143	0.70	0.00%	95.52%
QUANTITY:3D	→ CARDINAL + o + UNIT	3	143	2.10	0.00%	95.53%
QUANTITY:3D	→ MULT + UNIT	2	143	1.40	0.00%	95.53%
QUANTITY:3D	→ QUAL + CARDINAL + UNIT	1	143	0.70	0.00%	95.53%
QUANTITY:3D	→ QUAL + QUANTITY:3D	3	143	2.10	0.00%	95.53%
QUANTITY:3D	→ QUANTITY:3D + QUAL	1	143	0.70	0.00%	95.53%
QUANTITY:3D	→ UNIT	31	143	21.68	0.03%	95.57%
QUANTITY:3D	→ WEIGHT + o	1	143	0.70	0.00%	95.57%
QUANTITY:OTHER	→ CARDINAL	2	30	6.67	0.00%	95.57%
QUANTITY:OTHER	→ CARDINAL + MULT + UNIT	1	30	3.33	0.00%	95.57%
QUANTITY:OTHER	→ CARDINAL + UNIT	16	30	53.33	0.02%	95.59%
QUANTITY:OTHER	→ CARDINAL + o	1	30	3.33	0.00%	95.59%
QUANTITY:OTHER	→ CARDINAL + o + CARDINAL + o	1	30	3.33	0.00%	95.59%
QUANTITY:OTHER	→ CARDINAL + o + UNIT	8	30	26.67	0.01%	95.60%
QUANTITY:OTHER	→ QUANTITY:OTHER + o + QUANTITY:2D	1	30	3.33	0.00%	95.60%
RATE	→ CARDINAL	1	2107	0.05	0.00%	95.60%
RATE	→ CARDINAL + NATIONALITY + o + DURATION	1	2107	0.05	0.00%	95.60%
RATE	→ CARDINAL + QUANTITY:OTHER + o + DURATION	1	2107	0.05	0.00%	95.60%
RATE	→ CARDINAL + RATE	1	2107	0.05	0.00%	95.60%
RATE	→ CARDINAL + UNIT	1	2107	0.05	0.00%	95.61%
RATE	→ CARDINAL + o	6	2107	0.28	0.01%	95.61%
RATE	→ CARDINAL + o + CARDINAL	1	2107	0.05	0.00%	95.61%

rule	children	count	of	type %	% total	cumul've
RATE	→ CARDINAL + o + CARDINAL + o + DURATION	2	2107	0.09	0.00%	95.61%
RATE	→ CARDINAL + o + COUNTRY + o + DURATION	1	2107	0.05	0.00%	95.62%
RATE	→ CARDINAL + o + DATE	1	2107	0.05	0.00%	95.62%
RATE	→ CARDINAL + o + DURATION	59	2107	2.80	0.06%	95.68%
RATE	→ CARDINAL + o + ORG:CORP + o	1	2107	0.05	0.00%	95.68%
RATE	→ DURATION	1	2107	0.05	0.00%	95.68%
RATE	→ DURATION + o	1	2107	0.05	0.00%	95.68%
RATE	→ DURATION + o + DURATION	23	2107	1.09	0.02%	95.71%
RATE	→ FOLD + o + DURATION	1	2107	0.05	0.00%	95.71%
RATE	→ FOLD + o + UNIT	1	2107	0.05	0.00%	95.71%
RATE	→ IPOPOINTS + o + DURATION	2	2107	0.09	0.00%	95.71%
RATE	→ MONEY	90	2107	4.27	0.10%	95.81%
RATE	→ MONEY + CARDINAL + DURATION	1	2107	0.05	0.00%	95.81%
RATE	→ MONEY + PERIODIC	2	2107	0.09	0.00%	95.81%
RATE	→ MONEY + o	1410	2107	66.92	1.52%	97.33%
RATE	→ MONEY + o + CARDINAL	1	2107	0.05	0.00%	97.34%
RATE	→ MONEY + o + DURATION	112	2107	5.32	0.12%	97.46%
RATE	→ MONEY + o + INDEX + o	1	2107	0.05	0.00%	97.46%
RATE	→ MONEY + o + MONEY	13	2107	0.62	0.01%	97.47%
RATE	→ MONEY + o + MONEY + o	14	2107	0.66	0.02%	97.49%
RATE	→ MONEY + o + ORG:CORP + o	3	2107	0.14	0.00%	97.49%
RATE	→ MONEY + o + QUAL + UNIT	1	2107	0.05	0.00%	97.49%
RATE	→ MONEY + o + QUANTITY:2D	2	2107	0.09	0.00%	97.49%
RATE	→ MONEY + o + QUANTITY:3D	43	2107	2.04	0.05%	97.54%
RATE	→ MONEY + o + QUANTITY:3D + o	1	2107	0.05	0.00%	97.54%
RATE	→ MONEY + o + UNIT	51	2107	2.42	0.06%	97.59%
RATE	→ MONEY + o + UNIT + o	1	2107	0.05	0.00%	97.60%
RATE	→ MONEY + o + WEIGHT	84	2107	3.99	0.09%	97.69%
RATE	→ MONTH	1	2107	0.05	0.00%	97.69%
RATE	→ MONTH + o + UNIT	1	2107	0.05	0.00%	97.69%
RATE	→ NAME	1	2107	0.05	0.00%	97.69%
RATE	→ PERCENT + o	2	2107	0.09	0.00%	97.69%
RATE	→ PERCENT + o + DURATION	24	2107	1.14	0.03%	97.72%
RATE	→ QUAL + MONEY + o	3	2107	0.14	0.00%	97.72%
RATE	→ QUAL + RATE	5	2107	0.24	0.01%	97.73%
RATE	→ QUANTITY:1D + o + DURATION	2	2107	0.09	0.00%	97.73%
RATE	→ QUANTITY:2D + o	1	2107	0.05	0.00%	97.73%
RATE	→ QUANTITY:3D + o + DURATION	36	2107	1.71	0.04%	97.77%

rule	children	count	of	type %	% total	cumul've
RATE	→ QUANTITY:3D + o + NORP:OTHER + o + DURATION	1	2107	0.05	0.00%	97.77%
RATE	→ QUANTITY:3D + o + UNIT	1	2107	0.05	0.00%	97.77%
RATE	→ QUANTITY:OTHER + o	1	2107	0.05	0.00%	97.77%
RATE	→ QUANTITY:OTHER + o + DURATION	4	2107	0.19	0.00%	97.78%
RATE	→ RATE + QUAL	3	2107	0.14	0.00%	97.78%
RATE	→ RATE + o + RATE	3	2107	0.14	0.00%	97.78%
RATE	→ UNIT + CARDINAL + RATE	2	2107	0.09	0.00%	97.78%
RATE	→ UNIT + CARDINAL + o	2	2107	0.09	0.00%	97.79%
RATE	→ UNIT + RATE	2	2107	0.09	0.00%	97.79%
RATE	→ UNIT + o	62	2107	2.94	0.07%	97.86%
RATE	→ WEIGHT + PERIODIC	1	2107	0.05	0.00%	97.86%
RATE	→ WEIGHT + o + DURATION	7	2107	0.33	0.01%	97.86%
RATE	→ WEIGHT + o + PERIODIC	1	2107	0.05	0.00%	97.87%
RATE	→ o + DURATION	2	2107	0.09	0.00%	97.87%
RATE	→ o + MONEY	1	2107	0.05	0.00%	97.87%
RATE	→ o + QUANTITY:1D	1	2107	0.05	0.00%	97.87%
RATE	→ o + UNIT	1	2107	0.05	0.00%	97.87%
RATE	→ o + WEIGHT	1	2107	0.05	0.00%	97.87%
REGION	→ COUNTRY + o	7	185	3.78	0.01%	97.88%
REGION	→ LOCATION:OTHER + o	9	185	4.86	0.01%	97.89%
REGION	→ NAME	2	185	1.08	0.00%	97.89%
REGION	→ NAME + o	8	185	4.32	0.01%	97.90%
REGION	→ NATIONALITY + o	2	185	1.08	0.00%	97.90%
REGION	→ NORP:OTHER + o	3	185	1.62	0.00%	97.91%
REGION	→ OCEAN	12	185	6.49	0.01%	97.92%
REGION	→ OCEAN + o	4	185	2.16	0.00%	97.92%
REGION	→ ORDINAL + o	3	185	1.62	0.00%	97.93%
REGION	→ REGION + o	1	185	0.54	0.00%	97.93%
REGION	→ RIVER + o	2	185	1.08	0.00%	97.93%
REGION	→ STATE + o	4	185	2.16	0.00%	97.93%
REGION	→ o + CITY	3	185	1.62	0.00%	97.94%
REGION	→ o + CONTINENT	54	185	29.19	0.06%	98.00%
REGION	→ o + COUNTRY	13	185	7.03	0.01%	98.01%
REGION	→ o + NAME	1	185	0.54	0.00%	98.01%
REGION	→ o + OCEAN	3	185	1.62	0.00%	98.01%
REGION	→ o + OCEAN + o	1	185	0.54	0.00%	98.01%
REGION	→ o + REGION	1	185	0.54	0.00%	98.02%
REGION	→ o + STATE	52	185	28.11	0.06%	98.07%

rule	children	count	of	type %	% total	cumul've
REL	→ MONEY + o	1	4	25.00	0.00%	98.07%
REL	→ REL + o + REL	3	4	75.00	0.00%	98.08%
RELIGION	→ NATIONALITY + o	1	2	50.00	0.00%	98.08%
RELIGION	→ RELIGION + RELIGION	1	2	50.00	0.00%	98.08%
RIVER	→ DAY + o	1	21	4.76	0.00%	98.08%
RIVER	→ FIRST + o	3	21	14.29	0.00%	98.08%
RIVER	→ NAME	5	21	23.81	0.01%	98.09%
RIVER	→ NAME + o	10	21	47.62	0.01%	98.10%
RIVER	→ STATE + o	2	21	9.52	0.00%	98.10%
ROLE	→ CITY + ROLE	6	629	0.95	0.01%	98.11%
ROLE	→ COUNTRY + ROLE	1	629	0.16	0.00%	98.11%
ROLE	→ COUNTRY + o	1	629	0.16	0.00%	98.11%
ROLE	→ COUNTRY + o + ROLE	2	629	0.32	0.00%	98.11%
ROLE	→ GOVERNMENT + ROLE	143	629	22.73	0.15%	98.27%
ROLE	→ GOVERNMENT + ROLE + o + ROLE	1	629	0.16	0.00%	98.27%
ROLE	→ GOVERNMENT + o	27	629	4.29	0.03%	98.30%
ROLE	→ GOVERNMENT + o + ROLE	1	629	0.16	0.00%	98.30%
ROLE	→ GPE + ROLE	4	629	0.64	0.00%	98.30%
ROLE	→ HON + COUNTRY	4	629	0.64	0.00%	98.31%
ROLE	→ HON + ROLE	2	629	0.32	0.00%	98.31%
ROLE	→ MEDIA + ROLE	1	629	0.16	0.00%	98.31%
ROLE	→ MEDIA + o	5	629	0.79	0.01%	98.31%
ROLE	→ NATIONALITY + ROLE	75	629	11.92	0.08%	98.40%
ROLE	→ NATIONALITY + ROLE + o + COUNTRY	1	629	0.16	0.00%	98.40%
ROLE	→ NATIONALITY + o	10	629	1.59	0.01%	98.41%
ROLE	→ NATIONALITY + o + COUNTRY	1	629	0.16	0.00%	98.41%
ROLE	→ NATIONALITY + o + ROLE	1	629	0.16	0.00%	98.41%
ROLE	→ NORP:OTHER + NORP:POLITICAL + ROLE	1	629	0.16	0.00%	98.41%
ROLE	→ NORP:POLITICAL + ROLE	22	629	3.50	0.02%	98.43%
ROLE	→ NORP:POLITICAL + o + STATE	3	629	0.48	0.00%	98.44%
ROLE	→ ORDINAL + o	1	629	0.16	0.00%	98.44%
ROLE	→ ORG:CORP + PER	1	629	0.16	0.00%	98.44%
ROLE	→ ORG:CORP + ROLE	91	629	14.47	0.10%	98.54%
ROLE	→ ORG:CORP + ROLE + o + ROLE	1	629	0.16	0.00%	98.54%
ROLE	→ ORG:CORP + o	8	629	1.27	0.01%	98.55%
ROLE	→ ORG:CORP + o + ROLE	2	629	0.32	0.00%	98.55%
ROLE	→ ORG:EDU + ROLE	2	629	0.32	0.00%	98.55%
ROLE	→ ORG:OTHER + ROLE	7	629	1.11	0.01%	98.56%
ROLE	→ ORG:POLITICAL + ROLE	8	629	1.27	0.01%	98.57%

rule	children	count	of	type %	% total	cumul've
ROLE	→ ORG:POLITICAL + o + ROLE	1	629	0.16	0.00%	98.57%
ROLE	→ RELIGION + ROLE	1	629	0.16	0.00%	98.57%
ROLE	→ ROLE + FIRST + NAME	3	629	0.48	0.00%	98.57%
ROLE	→ ROLE + NAME	1	629	0.16	0.00%	98.57%
ROLE	→ ROLE + ORG:CORP	1	629	0.16	0.00%	98.58%
ROLE	→ ROLE + ORG:OTHER	3	629	0.48	0.00%	98.58%
ROLE	→ ROLE + PER	1	629	0.16	0.00%	98.58%
ROLE	→ ROLE + PER + o + STATE	1	629	0.16	0.00%	98.58%
ROLE	→ ROLE + ROLE	3	629	0.48	0.00%	98.58%
ROLE	→ ROLE + o	21	629	3.34	0.02%	98.61%
ROLE	→ ROLE + o + ARMY	1	629	0.16	0.00%	98.61%
ROLE	→ ROLE + o + CITY	2	629	0.32	0.00%	98.61%
ROLE	→ ROLE + o + COUNTRY	5	629	0.79	0.01%	98.62%
ROLE	→ ROLE + o + GOVERNMENT	22	629	3.50	0.02%	98.64%
ROLE	→ ROLE + o + ROLE	6	629	0.95	0.01%	98.65%
ROLE	→ SPORTS TEAM + o	1	629	0.16	0.00%	98.65%
ROLE	→ STATE + NORP:POLITICAL + ROLE	1	629	0.16	0.00%	98.65%
ROLE	→ STATE + ROLE	17	629	2.70	0.02%	98.67%
ROLE	→ VEHICLE + ROLE	1	629	0.16	0.00%	98.67%
ROLE	→ o + GOVERNMENT	6	629	0.95	0.01%	98.67%
ROLE	→ o + GOVERNMENT + o	1	629	0.16	0.00%	98.67%
ROLE	→ o + NATIONALITY + o	2	629	0.32	0.00%	98.68%
ROLE	→ o + ROLE	92	629	14.63	0.10%	98.78%
ROLE	→ o + ROLE + o	3	629	0.48	0.00%	98.78%
SEASON	→ NORP:OTHER + o	1	4	25.00	0.00%	98.78%
SEASON	→ SEASON + o + SEASON	3	4	75.00	0.00%	98.78%
SONG	→ FIRST + INI + NAME	1	9	11.11	0.00%	98.78%
SONG	→ PER + o	1	9	11.11	0.00%	98.79%
SONG	→ SUBURB	1	9	11.11	0.00%	98.79%
SONG	→ o + CARDINAL + o	2	9	22.22	0.00%	98.79%
SONG	→ o + NAME	1	9	11.11	0.00%	98.79%
SONG	→ o + NATIONALITY + o	1	9	11.11	0.00%	98.79%
SONG	→ o + NORP:OTHER	1	9	11.11	0.00%	98.79%
SONG	→ o + PER	1	9	11.11	0.00%	98.79%
SPEED	→ CARDINAL + SPEED	2	15	13.33	0.00%	98.80%
SPEED	→ CARDINAL + UNIT	6	15	40.00	0.01%	98.80%
SPEED	→ QUANTITY:1D + o + DURATION	5	15	33.33	0.01%	98.81%
SPEED	→ UNIT	2	15	13.33	0.00%	98.81%
SPORTS EVENT	→ BRIDGE + o	1	27	3.70	0.00%	98.81%

rule	children	count	of	type %	% total	cumul've
SPORTS EVENT	→ CITY + CARDINAL	1	27	3.70	0.00%	98.81%
SPORTS EVENT	→ CITY + o	1	27	3.70	0.00%	98.81%
SPORTS EVENT	→ DATE + SEASON + o	5	27	18.52	0.01%	98.82%
SPORTS EVENT	→ DATE + o	1	27	3.70	0.00%	98.82%
SPORTS EVENT	→ FACILITY + o	1	27	3.70	0.00%	98.82%
SPORTS EVENT	→ NAME + o	1	27	3.70	0.00%	98.82%
SPORTS EVENT	→ SEASON + o	5	27	18.52	0.01%	98.83%
SPORTS EVENT	→ SEASON + o + DATE	2	27	7.41	0.00%	98.83%
SPORTS EVENT	→ YEAR	1	27	3.70	0.00%	98.83%
SPORTS EVENT	→ YEAR + CITY + o	1	27	3.70	0.00%	98.83%
SPORTS EVENT	→ YEAR + SEASON + o	2	27	7.41	0.00%	98.83%
SPORTS EVENT	→ YEAR + o	1	27	3.70	0.00%	98.83%
SPORTS EVENT	→ o + CARDINAL	3	27	11.11	0.00%	98.84%
SPORTS EVENT	→ o + SEASON + o	1	27	3.70	0.00%	98.84%
SPORTS SEASON	→ CARDINAL + o + SPORTS SEASON	1	3	33.33	0.00%	98.84%
SPORTS SEASON	→ DATE + o	1	3	33.33	0.00%	98.84%
SPORTS SEASON	→ REL + SPORTS SEASON	1	3	33.33	0.00%	98.84%
SPORTS TEAM	→ CITY	16	68	23.53	0.02%	98.86%
SPORTS TEAM	→ CITY + SPORTS TEAM	9	68	13.24	0.01%	98.87%
SPORTS TEAM	→ CITY + o	38	68	55.88	0.04%	98.91%
SPORTS TEAM	→ GPE + o	1	68	1.47	0.00%	98.91%
SPORTS TEAM	→ NORP:OTHER	1	68	1.47	0.00%	98.91%
SPORTS TEAM	→ REGION + o	1	68	1.47	0.00%	98.91%
SPORTS TEAM	→ STATE + SPORTS TEAM	1	68	1.47	0.00%	98.91%
SPORTS TEAM	→ STATE + o	1	68	1.47	0.00%	98.92%
STADIUM	→ CITY	1	13	7.69	0.00%	98.92%
STADIUM	→ CITY + o	5	13	38.46	0.01%	98.92%
STADIUM	→ DURATION + DATE	1	13	7.69	0.00%	98.92%
STADIUM	→ NAME + o	1	13	7.69	0.00%	98.92%
STADIUM	→ NORP:OTHER + o	1	13	7.69	0.00%	98.92%
STADIUM	→ SPORTS TEAM + o	2	13	15.38	0.00%	98.93%
STADIUM	→ STATE + o	2	13	15.38	0.00%	98.93%
STATE	→ NATIONALITY + NAME	1	4	25.00	0.00%	98.93%
STATE	→ NATIONALITY + REGION	1	4	25.00	0.00%	98.93%
STATE	→ REL + DURATION	2	4	50.00	0.00%	98.93%
STREET	→ CARDINAL	3	92	3.26	0.00%	98.94%
STREET	→ CITY + o	1	92	1.09	0.00%	98.94%
STREET	→ FIRST + o	1	92	1.09	0.00%	98.94%
STREET	→ NAME + ORDINAL + o	3	92	3.26	0.00%	98.94%

rule	children	count	of	type %	% total	cumul've
STREET	→ NAME + o	43	92	46.74	0.05%	98.99%
STREET	→ NAME + o + ORDINAL + o	2	92	2.17	0.00%	98.99%
STREET	→ ORDINAL + o	18	92	19.57	0.02%	99.01%
STREET	→ ORG:CORP + o	1	92	1.09	0.00%	99.01%
STREET	→ STATE + o	4	92	4.35	0.00%	99.02%
STREET	→ o + CARDINAL	12	92	13.04	0.01%	99.03%
STREET	→ o + ORDINAL + o	3	92	3.26	0.00%	99.03%
STREET	→ o + PER	1	92	1.09	0.00%	99.03%
SUBURB	→ NAME	1	2	50.00	0.00%	99.03%
SUBURB	→ o + CARDINAL	1	2	50.00	0.00%	99.03%
TEMPERATURE	→ CARDINAL + o + CARDINAL	1	2	50.00	0.00%	99.04%
TEMPERATURE	→ o + CARDINAL + UNIT	1	2	50.00	0.00%	99.04%
TIME	→ CARDINAL	1	98	1.02	0.00%	99.04%
TIME	→ CARDINAL + DURATION	8	98	8.16	0.01%	99.05%
TIME	→ CARDINAL + o	42	98	42.86	0.05%	99.09%
TIME	→ CARDINAL + o + DURATION	2	98	2.04	0.00%	99.09%
TIME	→ DURATION + REL	4	98	4.08	0.00%	99.10%
TIME	→ DURATION + REL + TIME + DATE	1	98	1.02	0.00%	99.10%
TIME	→ ORDINAL + o	1	98	1.02	0.00%	99.10%
TIME	→ QUAL + CARDINAL + o	1	98	1.02	0.00%	99.10%
TIME	→ QUAL + DURATION	2	98	2.04	0.00%	99.10%
TIME	→ QUAL + TIME	14	98	14.29	0.02%	99.12%
TIME	→ QUAL + TIME + o + TIME	1	98	1.02	0.00%	99.12%
TIME	→ QUAL + o	1	98	1.02	0.00%	99.12%
TIME	→ QUAL + o + DURATION	1	98	1.02	0.00%	99.12%
TIME	→ REL + CARDINAL + DURATION	1	98	1.02	0.00%	99.12%
TIME	→ REL + DATE	3	98	3.06	0.00%	99.13%
TIME	→ REL + DURATION	3	98	3.06	0.00%	99.13%
TIME	→ REL + o + DURATION	1	98	1.02	0.00%	99.13%
TIME	→ TIME + QUAL	1	98	1.02	0.00%	99.13%
TIME	→ TIME + o	3	98	3.06	0.00%	99.14%
TIME	→ TIME + o + CITY + o	1	98	1.02	0.00%	99.14%
TIME	→ TIME + o + NORP:OTHER + o + OCEAN	1	98	1.02	0.00%	99.14%
TIME	→ TIME + o + TIME	2	98	2.04	0.00%	99.14%
TIME	→ TIME + o + TIME + o	1	98	1.02	0.00%	99.14%
TIME	→ o + TIME + o + TIME	1	98	1.02	0.00%	99.14%
TIME	→ o + TIME + o + TIME + o	1	98	1.02	0.00%	99.14%
TV SHOW	→ ANIMATE	2	67	2.99	0.00%	99.14%
TV SHOW	→ CARDINAL + DURATION	1	67	1.49	0.00%	99.15%

rule	children	count	of	type %	% total	cumul've
TV SHOW	→ CARDINAL + o	2	67	2.99	0.00%	99.15%
TV SHOW	→ CITY	2	67	2.99	0.00%	99.15%
TV SHOW	→ CITY + o	3	67	4.48	0.00%	99.15%
TV SHOW	→ DATE	2	67	2.99	0.00%	99.16%
TV SHOW	→ DATE + GAME	2	67	2.99	0.00%	99.16%
TV SHOW	→ DATE + o	1	67	1.49	0.00%	99.16%
TV SHOW	→ DURATION	1	67	1.49	0.00%	99.16%
TV SHOW	→ FIRST	1	67	1.49	0.00%	99.16%
TV SHOW	→ FIRST + o	1	67	1.49	0.00%	99.16%
TV SHOW	→ NAME	14	67	20.90	0.02%	99.18%
TV SHOW	→ NAME + GOVERNMENT	5	67	7.46	0.01%	99.18%
TV SHOW	→ NAME + o	5	67	7.46	0.01%	99.19%
TV SHOW	→ NICKNAME	8	67	11.94	0.01%	99.20%
TV SHOW	→ PER	2	67	2.99	0.00%	99.20%
TV SHOW	→ PER + o	1	67	1.49	0.00%	99.20%
TV SHOW	→ STREET	2	67	2.99	0.00%	99.20%
TV SHOW	→ STREET + o	1	67	1.49	0.00%	99.20%
TV SHOW	→ o + COUNTRY	1	67	1.49	0.00%	99.20%
TV SHOW	→ o + DATE:OTHER	1	67	1.49	0.00%	99.21%
TV SHOW	→ o + DURATION	1	67	1.49	0.00%	99.21%
TV SHOW	→ o + NAME	1	67	1.49	0.00%	99.21%
TV SHOW	→ o + NAME + o	5	67	7.46	0.01%	99.21%
TV SHOW	→ o + NICKNAME	1	67	1.49	0.00%	99.21%
TV SHOW	→ o + YEAR + o	1	67	1.49	0.00%	99.21%
UNIT	→ BAND + UNIT	1	218	0.46	0.00%	99.22%
UNIT	→ CARDINAL	8	218	3.67	0.01%	99.22%
UNIT	→ COUNTRY + UNIT	5	218	2.29	0.01%	99.23%
UNIT	→ NAME + UNIT	3	218	1.38	0.00%	99.23%
UNIT	→ NAME + o	4	218	1.83	0.00%	99.24%
UNIT	→ NATIONALITY + UNIT	184	218	84.40	0.20%	99.44%
UNIT	→ NATIONALITY + o	8	218	3.67	0.01%	99.44%
UNIT	→ NORP:OTHER + UNIT	2	218	0.92	0.00%	99.45%
UNIT	→ WEIGHT	3	218	1.38	0.00%	99.45%
VEHICLE	→ CARDINAL	21	124	16.94	0.02%	99.47%
VEHICLE	→ CARDINAL + o	1	124	0.81	0.00%	99.47%
VEHICLE	→ DATE + CARDINAL	1	124	0.81	0.00%	99.47%
VEHICLE	→ DATE + ORG:CORP + o	3	124	2.42	0.00%	99.48%
VEHICLE	→ DATE + VEHICLE	2	124	1.61	0.00%	99.48%
VEHICLE	→ DATE + o	3	124	2.42	0.00%	99.48%

rule	children	count	of	type %	% total	cumul've
VEHICLE	→ DATE + o + CARDINAL	1	124	0.81	0.00%	99.48%
VEHICLE	→ DATE + o + ORG:CORP + CARDINAL	1	124	0.81	0.00%	99.49%
VEHICLE	→ NAME	31	124	25.00	0.03%	99.52%
VEHICLE	→ NAME + VEHICLE	1	124	0.81	0.00%	99.52%
VEHICLE	→ ORG:CORP	6	124	4.84	0.01%	99.53%
VEHICLE	→ ORG:CORP + CARDINAL	4	124	3.23	0.00%	99.53%
VEHICLE	→ ORG:CORP + NORP:OTHER	1	124	0.81	0.00%	99.53%
VEHICLE	→ ORG:CORP + VEHICLE	10	124	8.06	0.01%	99.54%
VEHICLE	→ ORG:CORP + o	30	124	24.19	0.03%	99.58%
VEHICLE	→ SPACE	1	124	0.81	0.00%	99.58%
VEHICLE	→ o + CARDINAL	7	124	5.65	0.01%	99.58%
WAR	→ COUNTRY	7	41	17.07	0.01%	99.59%
WAR	→ COUNTRY + o	6	41	14.63	0.01%	99.60%
WAR	→ EVENT + o	1	41	2.44	0.00%	99.60%
WAR	→ NATIONALITY + o	1	41	2.44	0.00%	99.60%
WAR	→ o + CARDINAL	26	41	63.41	0.03%	99.63%
WEIGHT	→ CAPITAL + UNIT	1	273	0.37	0.00%	99.63%
WEIGHT	→ CARDINAL	5	273	1.83	0.01%	99.63%
WEIGHT	→ CARDINAL + MULT + UNIT	16	273	5.86	0.02%	99.65%
WEIGHT	→ CARDINAL + UNIT	143	273	52.38	0.15%	99.81%
WEIGHT	→ CARDINAL + WEIGHT	1	273	0.37	0.00%	99.81%
WEIGHT	→ CARDINAL + o + UNIT	11	273	4.03	0.01%	99.82%
WEIGHT	→ MULT + o + UNIT	1	273	0.37	0.00%	99.82%
WEIGHT	→ QUAL + WEIGHT + o + WEIGHT	1	273	0.37	0.00%	99.82%
WEIGHT	→ QUAL + o + WEIGHT	1	273	0.37	0.00%	99.82%
WEIGHT	→ UNIT	92	273	33.70	0.10%	99.92%
WEIGHT	→ WEIGHT + QUAL	1	273	0.37	0.00%	99.92%
WOA	→ CITY + o	3	64	4.69	0.00%	99.93%
WOA	→ CITY + o + HURRICANE + o	1	64	1.56	0.00%	99.93%
WOA	→ COUNTRY + o	3	64	4.69	0.00%	99.93%
WOA	→ COUNTRY + o + COUNTRY	1	64	1.56	0.00%	99.93%
WOA	→ DATE + o + CARDINAL	1	64	1.56	0.00%	99.93%
WOA	→ DATE + o + DATE + o + DATE	1	64	1.56	0.00%	99.93%
WOA	→ DAY + DURATION	1	64	1.56	0.00%	99.93%
WOA	→ DAY + DURATION + o + NAME	4	64	6.25	0.00%	99.94%
WOA	→ DAY + o	1	64	1.56	0.00%	99.94%
WOA	→ EVENT + o	1	64	1.56	0.00%	99.94%
WOA	→ FIRST + o + NATIONALITY + o	1	64	1.56	0.00%	99.94%
WOA	→ GOVERNMENT + o	1	64	1.56	0.00%	99.94%

rule	children	count	of	type %	% total	cumul've
WOA	→ GRP:ORG + o	1	64	1.56	0.00%	99.94%
WOA	→ LAW + o	1	64	1.56	0.00%	99.94%
WOA	→ NAME	3	64	4.69	0.00%	99.95%
WOA	→ NAME + o	5	64	7.81	0.01%	99.95%
WOA	→ NAME + o + NAME	1	64	1.56	0.00%	99.95%
WOA	→ NAME + o + NATIONALITY + o + NATIONALITY	1	64	1.56	0.00%	99.96%
	+ o					
WOA	→ NATIONALITY + o	5	64	7.81	0.01%	99.96%
WOA	→ NICKNAME + o	1	64	1.56	0.00%	99.96%
WOA	→ ORDINAL + o + WOA	1	64	1.56	0.00%	99.96%
WOA	→ ORG:CORP + o	1	64	1.56	0.00%	99.96%
WOA	→ PER + o	1	64	1.56	0.00%	99.97%
WOA	→ STATE + o	1	64	1.56	0.00%	99.97%
WOA	→ o + AGE + o	1	64	1.56	0.00%	99.97%
WOA	→ o + CARDINAL	2	64	3.12	0.00%	99.97%
WOA	→ o + CARDINAL + o	1	64	1.56	0.00%	99.97%
WOA	→ o + COUNTRY	1	64	1.56	0.00%	99.97%
WOA	→ o + DISEASE	1	64	1.56	0.00%	99.97%
WOA	→ o + EVENT	1	64	1.56	0.00%	99.97%
WOA	→ o + GOVERNMENT + o	1	64	1.56	0.00%	99.98%
WOA	→ o + HURRICANE + o	1	64	1.56	0.00%	99.98%
WOA	→ o + NAME	2	64	3.12	0.00%	99.98%
WOA	→ o + NAME + o + NAME	1	64	1.56	0.00%	99.98%
WOA	→ o + NATIONALITY + o	3	64	4.69	0.00%	99.98%
WOA	→ o + ORG:CORP	2	64	3.12	0.00%	99.98%
WOA	→ o + ORG:CORP + o + ORG:CORP + o	1	64	1.56	0.00%	99.99%
WOA	→ o + PER	1	64	1.56	0.00%	99.99%
WOA	→ o + PER + o	1	64	1.56	0.00%	99.99%
WOA	→ o + PER + o + PER	1	64	1.56	0.00%	99.99%
WOA	→ o + STATE	1	64	1.56	0.00%	99.99%
WOA	→ o + YEAR	1	64	1.56	0.00%	99.99%
YEAR	→ DATE + o + DATE	1	8	12.50	0.00%	99.99%
YEAR	→ MONEY + o + WEIGHT	1	8	12.50	0.00%	99.99%
YEAR	→ QUAL + o + IPOINTS	1	8	12.50	0.00%	99.99%
YEAR	→ YEAR + o + YEAR	5	8	62.50	0.01%	100.00%

I'm not sure what these 'new rules' are...

17 Rule Distribution

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rule	children	count	of	% total	cumul've
PER	→ HON + NAME	1968	4378	7.76%	7.76%
ORG:CORP	→ NAME	1669	4820	6.58%	14.34%
PERCENT	→ CARDINAL + UNIT	1529	1702	6.03%	20.36%
MONEY	→ UNIT + CARDINAL	1517	3135	5.98%	26.34%
PER	→ FIRST + NAME	1359	4378	5.36%	31.70%
CARDINAL	→ CARDINAL + MULT	1054	1772	4.15%	35.86%
DATE	→ REL + DURATION	1025	4442	4.04%	39.90%
DURATION	→ CARDINAL + DURATION	756	1184	2.98%	42.88%
DATE	→ YEAR	661	4442	2.61%	45.48%
MONEY	→ UNIT + CARDINAL + MULT	659	3135	2.60%	48.08%
ORG:CORP	→ o + CORP JARGON	581	4820	2.29%	50.37%
CARDINAL	→ QUAL + CARDINAL	526	1772	2.07%	52.44%
MONEY	→ CARDINAL + UNIT	443	3135	1.75%	54.19%
DATE	→ MONTH	397	4442	1.56%	55.76%
IPOINTS	→ CARDINAL	396	492	1.56%	57.32%
ORG:CORP	→ NAME + o	372	4820	1.47%	58.78%
PER	→ NAME	354	4378	1.40%	60.18%
ORG:CORP	→ NAME + o + CORP JARGON	353	4820	1.39%	61.57%
ORG:CORP	→ NAME + CORP JARGON	316	4820	1.25%	62.82%
NAME	→ NAME + NAME	312	804	1.23%	64.05%
DATE	→ DURATION + REL	304	4442	1.20%	65.24%
DATE	→ MONTH + NUMDAY	291	4442	1.15%	66.39%
DATE	→ DAY	287	4442	1.13%	67.52%
RATE	→ MONEY + o	281	485	1.11%	68.63%
PER	→ FIRST + INI + NAME	273	4378	1.08%	69.71%
DURATION	→ CARDINAL	267	1184	1.05%	70.76%
MONEY	→ QUAL + MONEY	204	3135	0.80%	71.56%
ORG:CORP	→ CITY	178	4820	0.70%	72.26%
ORG:CORP	→ NEWSPAPER	173	4820	0.68%	72.95%
NAME	→ NAME + o + NAME	163	804	0.64%	73.59%
DATE	→ REL + DATE	154	4442	0.61%	74.20%
ORG:CORP	→ BROADCASTER	140	4820	0.55%	74.75%
DATE	→ ORDINAL + DURATION	136	4442	0.54%	75.28%
ORG:CORP	→ CITY + o	123	4820	0.48%	75.77%
DATE	→ DURATION	114	4442	0.45%	76.22%
PER	→ HON + FIRST + NAME	97	4378	0.38%	76.60%

rule	children	count	of	% total	cumul've
NAME	→ FIRST + NAME	89	804	0.35%	76.95%
PERCENT	→ QUAL + PERCENT	89	1702	0.35%	77.30%
IPOINTS	→ CARDINAL + UNIT	88	492	0.35%	77.65%
DATE	→ MONTH + NUMDAY + o + YEAR	85	4442	0.34%	77.98%
CARDINAL	→ CARDINAL + o + CARDINAL	85	1772	0.34%	78.32%
GRP:ORG	→ STREET	84	102	0.33%	78.65%
DATE	→ MONTH + YEAR	81	4442	0.32%	78.97%
PER	→ FIRST	81	4378	0.32%	79.29%
DATE	→ REL + MONTH	77	4442	0.30%	79.59%
MONEY	→ QUAL + UNIT + CARDINAL + MULT	76	3135	0.30%	79.89%
ORG:CORP	→ NATIONALITY + o	76	4820	0.30%	80.19%
AGE	→ CARDINAL	74	124	0.29%	80.48%
NAME	→ INI + NAME	73	804	0.29%	80.77%
INDEX	→ ORG:CORP + o	70	128	0.28%	81.05%
PER	→ FIRST + MIDDLE + NAME	68	4378	0.27%	81.32%
DATE	→ REL + SEASON	66	4442	0.26%	81.58%
MONEY	→ CARDINAL + MULT + UNIT	64	3135	0.25%	81.83%
MONEY	→ MONEY + o + MONEY	60	3135	0.24%	82.06%
UNIT	→ NATIONALITY + UNIT	59	69	0.23%	82.30%
ORG:CORP	→ STATE + o	58	4820	0.23%	82.53%
ORG:CORP	→ NAME + o + CORP JARGON + o	57	4820	0.22%	82.75%
NAME	→ NAME + NAME + NAME	56	804	0.22%	82.97%
DATE	→ REL + DAY	52	4442	0.20%	83.18%
PERCENT	→ PERCENT + o + PERCENT	47	1702	0.19%	83.36%
GOVERNMENT	→ BUILDING	46	217	0.18%	83.54%
DATE	→ REL + o + DURATION	45	4442	0.18%	83.72%
WEIGHT	→ CARDINAL + UNIT	44	83	0.17%	83.89%
ORG:CORP	→ o + CORP JARGON + o	44	4820	0.17%	84.07%
RATE	→ MONEY + o + DURATION	40	485	0.16%	84.22%
BROADCASTER	→ NAME	39	56	0.15%	84.38%
GOVERNMENT	→ NATIONALITY + o	38	217	0.15%	84.53%
CARDINAL	→ MULT	38	1772	0.15%	84.68%
DATE	→ DURATION + o + DATE	37	4442	0.15%	84.82%
LAW	→ o + CARDINAL	36	75	0.14%	84.97%
ORG:CORP	→ ORG:CORP + o	36	4820	0.14%	85.11%
ORG:CORP	→ o + COUNTRY	36	4820	0.14%	85.25%
ORG:CORP	→ NATIONALITY + o + CORP JARGON	35	4820	0.14%	85.39%
ORG:CORP	→ o + NAME	33	4820	0.13%	85.52%
STREET	→ NAME + o	33	55	0.13%	85.65%

rule	children	count	of	% total	cumul've
MONEY	→ QUAL + UNIT + CARDINAL	32	3135	0.13%	85.77%
QUANTITY:1D	→ CARDINAL + UNIT	31	47	0.12%	85.90%
ORG:CORP	→ NAME + CORP JARGON + o	28	4820	0.11%	86.01%
DATE	→ ORDINAL + DURATION + o + DATE	28	4442	0.11%	86.12%
ORG:CORP	→ ORDINAL + o	27	4820	0.11%	86.22%
DATE	→ o + YEAR	27	4442	0.11%	86.33%
DURATION	→ CARDINAL + o + DURATION	26	1184	0.10%	86.43%
CARDINAL	→ QUAL + o + CARDINAL	26	1772	0.10%	86.53%
PERIODIC	→ o + DURATION	26	56	0.10%	86.64%
DATE	→ SEASON	26	4442	0.10%	86.74%
PER	→ FIRST + INI + NAME + NAMEMOD	26	4378	0.10%	86.84%
DURATION	→ REL + DURATION	26	1184	0.10%	86.94%
GRP:PER	→ NAME	26	50	0.10%	87.05%
ORG:CORP	→ o + CITY	26	4820	0.10%	87.15%
GOVERNMENT	→ STATE + o	25	217	0.10%	87.25%
FOLD	→ CARDINAL + o	25	41	0.10%	87.35%
ORG:EDU	→ o + STATE	25	122	0.10%	87.44%
WEIGHT	→ UNIT	24	83	0.09%	87.54%
CARDINAL	→ CARDINAL + QUAL	24	1772	0.09%	87.63%
DATE	→ o + DURATION	24	4442	0.09%	87.73%
RATE	→ MONEY + o + WEIGHT	24	485	0.09%	87.82%
SPORTS TEAM	→ CITY + o	24	33	0.09%	87.92%
NEWSPAPER	→ CITY + o	23	65	0.09%	88.01%
DATE	→ REL + YEAR	23	4442	0.09%	88.10%
INDEX	→ ORG:CORP + CARDINAL	23	128	0.09%	88.19%
DATE	→ EVENT	23	4442	0.09%	88.28%
GRP:PER	→ NAME + o	23	50	0.09%	88.37%
DATE	→ REL + o + DATE	23	4442	0.09%	88.46%
GOVERNMENT	→ GOVERNMENT + o	23	217	0.09%	88.55%
ORG:OTHER	→ NATIONALITY + o	22	92	0.09%	88.64%
RATE	→ MONEY	22	485	0.09%	88.73%
REGION	→ o + CONTINENT	22	44	0.09%	88.81%
DURATION	→ QUAL + DURATION	22	1184	0.09%	88.90%
AGE	→ CARDINAL + DURATION + o	22	124	0.09%	88.99%
VEHICLE	→ ORG:CORP + o	22	54	0.09%	89.07%
MONEY	→ CARDINAL + o + UNIT	21	3135	0.08%	89.16%
ORG:EDU	→ NAME + o	21	122	0.08%	89.24%
PRODUCT:OTHER	→ LOCATION:OTHER	21	78	0.08%	89.32%
NAME	→ NAME + o + NAME + o + NAME	21	804	0.08%	89.40%

rule	children	count	of	% total	cumul've
ELECTRONICS	→ CARDINAL	21	30	0.08%	89.49%
DATE	→ DATE + DURATION	21	4442	0.08%	89.57%
RATE	→ CARDINAL + o + DURATION	20	485	0.08%	89.65%
PER	→ HON + FIRST	20	4378	0.08%	89.73%
RATE	→ MONEY + o + UNIT	20	485	0.08%	89.81%
DATE	→ REL + o + MONTH	19	4442	0.07%	89.88%
PRODUCT:OTHER	→ NAME	19	78	0.07%	89.96%
ORG:EDU	→ NAME	18	122	0.07%	90.03%
MONEY	→ CARDINAL	18	3135	0.07%	90.10%
DATE	→ CARDINAL + DURATION	18	4442	0.07%	90.17%
PER	→ NICKNAME	17	4378	0.07%	90.24%
PER	→ INI + MIDDLE + NAME	17	4378	0.07%	90.30%
QUANTITY:3D	→ CARDINAL + UNIT	17	45	0.07%	90.37%
ORG:CORP	→ CITY + o + CORP JARGON	17	4820	0.07%	90.44%
AGE	→ DURATION + o	16	124	0.06%	90.50%
DATE	→ ORDINAL + DURATION + o + YEAR	16	4442	0.06%	90.56%
DURATION	→ QUAL + o + DURATION	16	1184	0.06%	90.63%
FOLD	→ QUAL + FOLD	15	41	0.06%	90.69%
ORG:CORP	→ COUNTRY + o	15	4820	0.06%	90.74%
ORG:CORP	→ ORDINAL + CITY	15	4820	0.06%	90.80%
RATE	→ MONEY + o + QUANTITY:3D	15	485	0.06%	90.86%
VEHICLE	→ CARDINAL	15	54	0.06%	90.92%
DATE	→ REL + o + YEAR	15	4442	0.06%	90.98%
DATE	→ DAY + DURATION	15	4442	0.06%	91.04%
ORG:EDU	→ CITY + o	14	122	0.06%	91.10%
NAME	→ FIRST + INI + NAME	14	804	0.06%	91.15%
RATE	→ QUANTITY:3D + o + DURATION	14	485	0.06%	91.21%
NAME	→ FIRST + MIDDLE	13	804	0.05%	91.26%
GOVERNMENT	→ NORP:OTHER + o	13	217	0.05%	91.31%
ORG:CORP	→ STATE + o + CORP JARGON	13	4820	0.05%	91.36%
GOVERNMENT	→ CITY	13	217	0.05%	91.41%
DATE	→ DATE + o + DATE	13	4442	0.05%	91.46%
GOVERNMENT	→ o + COUNTRY	13	217	0.05%	91.51%
INDEX	→ ORG:CORP + CARDINAL + o	12	128	0.05%	91.56%
DATE	→ QUAL + DATE	12	4442	0.05%	91.61%
ORG:CORP	→ LOCATION:OTHER	12	4820	0.05%	91.65%
EVENT	→ o + DAY	12	47	0.05%	91.70%
ORG:CORP	→ o + NAME + CORP JARGON	12	4820	0.05%	91.75%
EVENT	→ DATE	12	47	0.05%	91.80%

rule	children	count	of	% total	cumul've
ORG:CORP	→ REGION + o	12	4820	0.05%	91.84%
PER	→ INI + NAME	11	4378	0.04%	91.89%
ORG:EDU	→ o + CITY	11	122	0.04%	91.93%
TIME	→ CARDINAL + o	11	17	0.04%	91.97%
DURATION	→ ORDINAL + DURATION	11	1184	0.04%	92.02%
ORG:CORP	→ o + CITY + CORP JARGON	11	4820	0.04%	92.06%
ORG:CORP	→ o + COUNTRY + CORP JARGON	11	4820	0.04%	92.10%
LAW	→ NAME	10	75	0.04%	92.14%
QUANTITY:3D	→ CARDINAL + MULT + UNIT	10	45	0.04%	92.18%
DATE	→ o + DAY	10	4442	0.04%	92.22%
GOVERNMENT	→ CITY + o	10	217	0.04%	92.26%
PER	→ FIRST + NAME + NAMEMOD	10	4378	0.04%	92.30%
ORG:EDU	→ CITY	10	122	0.04%	92.34%
NEWSPAPER	→ o + GRP:ORG + o	10	65	0.04%	92.38%
ORG:CORP	→ o + STATE	10	4820	0.04%	92.42%
WAR	→ o + CARDINAL	9	16	0.04%	92.46%
ORG:CORP	→ NAME + CORP JARGON + CORP JARGON	9	4820	0.04%	92.49%
NAME	→ INI + NAME + NAME	9	804	0.04%	92.53%
DATE	→ ORDINAL + CARDINAL + DATE	9	4442	0.04%	92.56%
DATE	→ QUAL + DURATION	9	4442	0.04%	92.60%
BUILDING	→ ORG:CORP + o	9	29	0.04%	92.63%
ORG:OTHER	→ NAME + o	9	92	0.04%	92.67%
LAW	→ ORDINAL + o	9	75	0.04%	92.70%
GRP:ORG	→ o + CARDINAL	9	102	0.04%	92.74%
QUANTITY:2D	→ CARDINAL + UNIT	9	15	0.04%	92.77%
WEIGHT	→ CARDINAL + o + UNIT	9	83	0.04%	92.81%
NAME	→ HON + FIRST	8	804	0.03%	92.84%
DURATION	→ DURATION + o + DURATION	8	1184	0.03%	92.87%
PER	→ HON + FIRST + INI + NAME	8	4378	0.03%	92.90%
ORG:POLITICAL	→ NORP:OTHER + o	8	13	0.03%	92.94%
ORG:CORP	→ ORDINAL + CITY + CORP JARGON	8	4820	0.03%	92.97%
LOCATION:OTHER	→ NAME + o	8	24	0.03%	93.00%
DATE	→ QUAL + o + DATE	8	4442	0.03%	93.03%
ORG:OTHER	→ NORP:OTHER + o	8	92	0.03%	93.06%
DATE	→ DATE + o + ORDINAL + DURATION	8	4442	0.03%	93.09%
DATE	→ o + DURATION + o + DATE	8	4442	0.03%	93.13%
FIRST	→ FIRST + o + FIRST	8	10	0.03%	93.16%
TV SHOW	→ NAME	8	26	0.03%	93.19%
ORG:CORP	→ o + ORDINAL + CITY	8	4820	0.03%	93.22%

rule	children	count	of	% total	cumul've
DATE	→ o + ORDINAL + DURATION + o + DATE	8	4442	0.03%	93.25%
RIVER	→ NAME + o	8	13	0.03%	93.28%
ORG:CORP	→ NORP:OTHER + o	8	4820	0.03%	93.31%
DATE	→ DURATION + o + YEAR	8	4442	0.03%	93.35%
BUILDING	→ NAME + o	8	29	0.03%	93.38%
ORG:CORP	→ o + NATIONALITY	8	4820	0.03%	93.41%
SPORTS TEAM	→ CITY	7	33	0.03%	93.44%
NAME	→ NAME + NAME + o + NAME + NAME	7	804	0.03%	93.46%
PER	→ NAME + FIRST	7	4378	0.03%	93.49%
ORG:CORP	→ OCEAN + o	7	4820	0.03%	93.52%
ORG:CORP	→ ORDINAL + o + CORP JARGON	7	4820	0.03%	93.55%
DATE:OTHER	→ REL + DURATION	7	12	0.03%	93.57%
ORG:EDU	→ ORG:EDU + o	7	122	0.03%	93.60%
DISEASE	→ NAME + o	7	7	0.03%	93.63%
BROADCASTER	→ NATIONALITY + o	7	56	0.03%	93.66%
DATE	→ CARDINAL + DURATION + REL	7	4442	0.03%	93.68%
PRODUCT:OTHER	→ ORG:CORP + o	7	78	0.03%	93.71%
DATE	→ YEAR + o + YEAR	7	4442	0.03%	93.74%
LAW	→ ORDINAL	7	75	0.03%	93.77%
INDEX	→ ORG:CORP + o + CARDINAL + o	7	128	0.03%	93.80%
REGION	→ o + STATE	7	44	0.03%	93.82%
ORG:CORP	→ NATIONALITY	7	4820	0.03%	93.85%
STREET	→ ORDINAL + o	7	55	0.03%	93.88%
PERCENT	→ CARDINAL	7	1702	0.03%	93.91%
MONEY	→ UNIT	7	3135	0.03%	93.93%
POINTS	→ CARDINAL + UNIT	7	8	0.03%	93.96%
DATE	→ REL + CARDINAL + DURATION	7	4442	0.03%	93.99%
HURRICANE	→ o + FIRST	7	10	0.03%	94.02%
PERCENT	→ QUAL + CARDINAL + UNIT	7	1702	0.03%	94.04%
QUANTITY:3D	→ QUAL + QUANTITY:3D	7	45	0.03%	94.07%
NEWSPAPER	→ NATIONALITY + o	7	65	0.03%	94.10%
DATE	→ REL	7	4442	0.03%	94.13%
ORG:CORP	→ REGION	6	4820	0.02%	94.15%
DATE	→ YEAR + DURATION	6	4442	0.02%	94.17%
REGION	→ OCEAN	6	44	0.02%	94.20%
ORG:OTHER	→ COUNTRY + o	6	92	0.02%	94.22%
DATE	→ o + ORDINAL + DURATION	6	4442	0.02%	94.24%
ORG:CORP	→ NEWSPAPER + CORP JARGON	6	4820	0.02%	94.27%
STREET	→ o + CARDINAL	6	55	0.02%	94.29%

rule	children	count	of	% total	cumul've
NAME	→ INI + MIDDLE + NAME	6	804	0.02%	94.32%
ORG:CORP	→ o + REGION	6	4820	0.02%	94.34%
FUND	→ NAME + o	6	15	0.02%	94.36%
DATE	→ ORDINAL + o + DURATION	6	4442	0.02%	94.39%
ELECTRONICS	→ ORG:CORP + CARDINAL	6	30	0.02%	94.41%
PER	→ HON	6	4378	0.02%	94.43%
ORG:CORP	→ NAME + o + COUNTRY + o + CORP JARGON	6	4820	0.02%	94.46%
ORG:OTHER	→ CITY + o	6	92	0.02%	94.48%
GOVERNMENT	→ NAME + o	6	217	0.02%	94.50%
RATE	→ WEIGHT + o + DURATION	6	485	0.02%	94.53%
NAME	→ NAME + o + NAME + o + NAME + o + NAME	6	804	0.02%	94.55%
DATE	→ TIME + DATE	6	4442	0.02%	94.58%
FACILITY	→ o + CARDINAL	6	19	0.02%	94.60%
ORG:EDU	→ STATE + o	6	122	0.02%	94.62%
ORG:CORP	→ GRP:PER	5	4820	0.02%	94.64%
ORG:CORP	→ ORDINAL + CITY + CORP JARGON + o	5	4820	0.02%	94.66%
DATE	→ YEAR + ORDINAL + DURATION	5	4442	0.02%	94.68%
DATE	→ TIME + DAY	5	4442	0.02%	94.70%
ORG:OTHER	→ o + CARDINAL	5	92	0.02%	94.72%
DATE	→ ORDINAL + CARDINAL + DURATION	5	4442	0.02%	94.74%
ORG:OTHER	→ o + COUNTRY	5	92	0.02%	94.76%
BROADCASTER	→ o + CORP JARGON	5	56	0.02%	94.78%
UNIT	→ NATIONALITY + o	5	69	0.02%	94.80%
ORG:CORP	→ STREET	5	4820	0.02%	94.82%
PER	→ FIRST + MIDDLE + NAME + NAMEMOD	5	4378	0.02%	94.84%
EVENT	→ YEAR + o	5	47	0.02%	94.86%
ORG:CORP	→ o + NORP:OTHER	5	4820	0.02%	94.88%
RIVER	→ NAME	5	13	0.02%	94.90%
ORG:OTHER	→ STATE + o	5	92	0.02%	94.92%
QUANTITY:OTHER	→ CARDINAL + o	5	11	0.02%	94.94%
ORG:RELIGIOUS	→ NAME + o	5	10	0.02%	94.96%
DURATION	→ DURATION + REL	5	1184	0.02%	94.98%
NUMDAY	→ NUMDAY + o + NUMDAY	5	5	0.02%	95.00%
ORG:CORP	→ ORG:CORP + o + CORP JARGON	5	4820	0.02%	95.02%
ORG:CORP	→ REGION + o + CORP JARGON	5	4820	0.02%	95.04%
DATE	→ DAY + o + MONTH + NUMDAY + o + YEAR	5	4442	0.02%	95.06%
PRODUCT:OTHER	→ NAME + o	5	78	0.02%	95.08%
ORG:CORP	→ OCEAN	5	4820	0.02%	95.10%
ORG:CORP	→ COUNTRY	5	4820	0.02%	95.12%

rule	children	count	of	% total	cumul've
QUANTITY:OTHER	→ CARDINAL + UNIT	5	11	0.02%	95.14%
DATE	→ SEASON + DURATION	4	4442	0.02%	95.15%
ORG:CORP	→ LOCATION:OTHER + o	4	4820	0.02%	95.17%
REGION	→ o + COUNTRY	4	44	0.02%	95.18%
ORG:CORP	→ NAME + STREET	4	4820	0.02%	95.20%
INDEX	→ ORG:CORP	4	128	0.02%	95.21%
NORP:OTHER	→ OCEAN	4	10	0.02%	95.23%
QUANTITY:3D	→ UNIT	4	45	0.02%	95.25%
QUANTITY:2D	→ CARDINAL + o + UNIT	4	15	0.02%	95.26%
RATE	→ DURATION + o + DURATION	4	485	0.02%	95.28%
DATE	→ DAY + o + NUMDAY	4	4442	0.02%	95.29%
ORG:CORP	→ STATE	4	4820	0.02%	95.31%
MONEY	→ MONEY + QUAL	4	3135	0.02%	95.32%
LOCATION:OTHER	→ CITY + o	4	24	0.02%	95.34%
DATE	→ DURATION + o + REL	4	4442	0.02%	95.36%
PER	→ FIRST + o + NAME	4	4378	0.02%	95.37%
ANIMATE	→ FIRST + NAME	4	9	0.02%	95.39%
DATE	→ DATE + QUAL	4	4442	0.02%	95.40%
DATE	→ REL + MONTH + NUMDAY	4	4442	0.02%	95.42%
DATE	→ CARDINAL + o + DURATION	4	4442	0.02%	95.44%
BUILDING	→ NAME	4	29	0.02%	95.45%
SPEED	→ CARDINAL + SPEED	4	10	0.02%	95.47%
PERCENT	→ o + UNIT	4	1702	0.02%	95.48%
GOVERNMENT	→ NAME	4	217	0.02%	95.50%
ORG:CORP	→ o + CORP JARGON + CORP JARGON	4	4820	0.02%	95.51%
DATE	→ DURATION + o + MONTH + NUMDAY	4	4442	0.02%	95.53%
NAME	→ FIRST + o + NAME	4	804	0.02%	95.55%
BUILDING	→ ORG:CORP	4	29	0.02%	95.56%
MULT	→ MULT + o + MULT	4	4	0.02%	95.58%
LAW	→ CITY + o	4	75	0.02%	95.59%
PERIODIC	→ DAY + DURATION	4	56	0.02%	95.61%
QUANTITY:1D	→ UNIT	4	47	0.02%	95.62%
LOCATION:OTHER	→ o + COUNTRY	4	24	0.02%	95.64%
DURATION	→ ORG:CORP + o	4	1184	0.02%	95.66%
MONEY	→ QUAL + MONEY + o + MONEY	4	3135	0.02%	95.67%
FUND	→ COUNTRY + o	4	15	0.02%	95.69%
ORG:CORP	→ o + NATIONALITY + o	4	4820	0.02%	95.70%
ORG:CORP	→ OCEAN + o + CORP JARGON	4	4820	0.02%	95.72%
HOTEL	→ NAME + o	4	7	0.02%	95.73%

rule	children	count	of	% total	cumul've
ORG:CORP	→ NAME + COUNTRY	4	4820	0.02%	95.75%
DATE	→ REL + DURATION + DATE	4	4442	0.02%	95.77%
MONEY	→ CARDINAL + MULT	4	3135	0.02%	95.78%
RATE	→ PERCENT + o + DURATION	3	485	0.01%	95.79%
DATE	→ o + DURATION + o + YEAR	3	4442	0.01%	95.81%
AGE	→ o + CARDINAL	3	124	0.01%	95.82%
ORG:OTHER	→ o + NORP:OTHER + o	3	92	0.01%	95.83%
PRODUCT:OTHER	→ o + CARDINAL	3	78	0.01%	95.84%
CITY	→ NAME + o	3	6	0.01%	95.85%
ORG:POLITICAL	→ NATIONALITY + o	3	13	0.01%	95.86%
DATE	→ MONTH + DATE	3	4442	0.01%	95.88%
AIRPORT	→ NAME + o	3	7	0.01%	95.89%
ORG:CORP	→ NAME + COUNTRY + CORP JARGON	3	4820	0.01%	95.90%
LAW	→ NAME + o	3	75	0.01%	95.91%
DATE	→ DURATION + o + DURATION	3	4442	0.01%	95.92%
QUANTITY:1D	→ QUAL + QUANTITY:1D	3	47	0.01%	95.94%
NICKNAME	→ o + FIRST	3	4	0.01%	95.95%
DATE	→ CARDINAL + REL + DURATION	3	4442	0.01%	95.96%
GOVERNMENT	→ ORDINAL + o	3	217	0.01%	95.97%
ORG:EDU	→ GPE	3	122	0.01%	95.98%
CARDINAL	→ QUAL + QUAL + CARDINAL	3	1772	0.01%	95.99%
RATE	→ UNIT + o	3	485	0.01%	96.01%
PERCENT	→ CARDINAL + o + UNIT	3	1702	0.01%	96.02%
PRODUCT:FOOD	→ ORG:CORP + o	3	3	0.01%	96.03%
MONEY	→ QUAL + o + MONEY	3	3135	0.01%	96.04%
VEHICLE	→ DATE + o	3	54	0.01%	96.05%
PER	→ HON + LAST	3	4378	0.01%	96.07%
ORDINAL	→ ORDINAL + o + ORDINAL	3	7	0.01%	96.08%
GOVERNMENT	→ o + CORP JARGON	3	217	0.01%	96.09%
SPEED	→ UNIT	3	10	0.01%	96.10%
ELECTRONICS	→ ORG:CORP + o	3	30	0.01%	96.11%
GOVERNMENT	→ o + NATIONALITY	3	217	0.01%	96.13%
ORG:CORP	→ NAME + NAME	3	4820	0.01%	96.14%
ORG:CORP	→ NAME + o + CORP JARGON + CORP JARGON	3	4820	0.01%	96.15%
PERCENT	→ CARDINAL + PERCENT	3	1702	0.01%	96.16%
DATE	→ REL + o + ORDINAL + DURATION	3	4442	0.01%	96.17%
NEWSPAPER	→ o + COUNTRY	3	65	0.01%	96.18%
RATE	→ QUANTITY:OTHER + o + DURATION	3	485	0.01%	96.20%
PER	→ HON + o + NAME	3	4378	0.01%	96.21%

rule	children	count	of	% total	cumul've
ORG:CORP	→ GRP:PER + CORP JARGON	3	4820	0.01%	96.22%
STREET	→ NAME + ORDINAL + o	3	55	0.01%	96.23%
GOVERNMENT	→ ORDINAL + NATIONALITY + o	3	217	0.01%	96.24%
WAR	→ COUNTRY	3	16	0.01%	96.26%
ORDINAL	→ o + CARDINAL	3	7	0.01%	96.27%
ORG:CORP	→ REGION + NAME + CORP JARGON	3	4820	0.01%	96.28%
ORG:CORP	→ LOCATION:OTHER + CORP JARGON	3	4820	0.01%	96.29%
AWARD	→ NAME + o	3	5	0.01%	96.30%
TV SHOW	→ o + NAME + o	3	26	0.01%	96.31%
ORG:OTHER	→ o + CORP JARGON	3	92	0.01%	96.33%
NEWSPAPER	→ COUNTRY + o	3	65	0.01%	96.34%
IPOINTS	→ CARDINAL + o + UNIT	3	492	0.01%	96.35%
DATE	→ DURATION + REL + o + DATE	3	4442	0.01%	96.36%
ORG:CORP	→ NAME + o + NAME + o + CORP JARGON	3	4820	0.01%	96.37%
DATE	→ CARDINAL	3	4442	0.01%	96.39%
DATE	→ YEAR + o + DURATION	3	4442	0.01%	96.40%
PRODUCT:OTHER	→ ORG:CORP	3	78	0.01%	96.41%
DATE	→ ORDINAL + DURATION + o	3	4442	0.01%	96.42%
ORG:CORP	→ o + OCEAN	3	4820	0.01%	96.43%
VEHICLE	→ ORG:CORP + CARDINAL	3	54	0.01%	96.44%
QUANTITY:3D	→ CARDINAL + o + UNIT	3	45	0.01%	96.46%
TV SHOW	→ NAME + o	3	26	0.01%	96.47%
DATE	→ ORDINAL + DURATION + DATE	3	4442	0.01%	96.48%
SPORTS EVENT	→ o + CARDINAL	3	9	0.01%	96.49%
NAME	→ NAME + NAME + NAME + o + NAME	3	804	0.01%	96.50%
ARMY	→ NATIONALITY + o	3	3	0.01%	96.52%
PER	→ FIRST + LAST	3	4378	0.01%	96.53%
ORG:CORP	→ FIRST + NAME	3	4820	0.01%	96.54%
DATE	→ REL + PERIODIC	3	4442	0.01%	96.55%
DURATION	→ ORDINAL + o + DURATION	3	1184	0.01%	96.56%
ANIMATE	→ FIRST	3	9	0.01%	96.57%
DATE	→ DURATION + o	3	4442	0.01%	96.59%
ORG:CORP	→ o + COUNTRY + CORP JARGON + o	2	4820	0.01%	96.59%
DATE	→ PER + DURATION	2	4442	0.01%	96.60%
UNIT	→ NAME + UNIT	2	69	0.01%	96.61%
PER	→ NAME + FIRST + MIDDLE	2	4378	0.01%	96.62%
DURATION	→ ORDINAL + CARDINAL + DURATION	2	1184	0.01%	96.63%
FACILITY	→ NAME	2	19	0.01%	96.63%
QUANTITY:1D	→ CARDINAL + o	2	47	0.01%	96.64%

rule	children	count	of	% total	cumul've
WEIGHT	→ CARDINAL + MULT + UNIT	2	83	0.01%	96.65%
CARDINAL	→ QUAL + o + ORDINAL	2	1772	0.01%	96.66%
BROADCASTER	→ NAME + o + CORP JARGON	2	56	0.01%	96.67%
DURATION	→ DURATION + DURATION	2	1184	0.01%	96.67%
FACILITY	→ STATE + o	2	19	0.01%	96.68%
DATE	→ o + YEAR + o + YEAR	2	4442	0.01%	96.69%
CARDINAL	→ QUAL + CARDINAL + o + CARDINAL	2	1772	0.01%	96.70%
REGION	→ NORP:OTHER + o	2	44	0.01%	96.70%
PER	→ INI + MIDDLE + NAME + NAMEMOD	2	4378	0.01%	96.71%
MUSEUM	→ ORG:EDU + o	2	3	0.01%	96.72%
EVENT	→ PERIODIC	2	47	0.01%	96.73%
DURATION	→ CARDINAL + SPORTS SEASON	2	1184	0.01%	96.74%
INDEX	→ NAME + o	2	128	0.01%	96.74%
BUILDING	→ CITY + o	2	29	0.01%	96.75%
ORG:CORP	→ NATIONALITY + NAME + o + CORP JARGON	2	4820	0.01%	96.76%
ORG:CORP	→ PRODUCT:FOOD	2	4820	0.01%	96.77%
ORG:CORP	→ OCEAN + ORDINAL + o + CORP JARGON	2	4820	0.01%	96.78%
PERIODIC	→ QUAL + PERIODIC	2	56	0.01%	96.78%
ORG:CORP	→ o + CORP JARGON + o + COUNTRY	2	4820	0.01%	96.79%
BOOK	→ o + NATIONALITY + o	2	12	0.01%	96.80%
EVENT	→ o + DURATION	2	47	0.01%	96.81%
DURATION	→ MONTH + o + MONTH	2	1184	0.01%	96.81%
RATE	→ QUANTITY:OTHER + o	2	485	0.01%	96.82%
ORG:EDU	→ o + CORP JARGON	2	122	0.01%	96.83%
PER	→ FIRST + o + NAME + o	2	4378	0.01%	96.84%
ORG:OTHER	→ o + CITY	2	92	0.01%	96.85%
PERCENT	→ PERCENT + QUAL	2	1702	0.01%	96.85%
NAME	→ NAME + o + NAME + NAME	2	804	0.01%	96.86%
PERIODIC	→ EVENT	2	56	0.01%	96.87%
NAME	→ NAME + NAME + o + NAME	2	804	0.01%	96.88%
GRP:LOC	→ NORP:OTHER + o	2	4	0.01%	96.89%
ORG:CORP	→ CITY + OCEAN	2	4820	0.01%	96.89%
VEHICLE	→ DATE + o + ORG:CORP + o	2	54	0.01%	96.90%
ORG:CORP	→ o + ORDINAL + CITY + CORP JARGON	2	4820	0.01%	96.91%
IPOINTS	→ QUAL + IPOINTS	2	492	0.01%	96.92%
ORG:CORP	→ o + CORP JARGON + o + STATE	2	4820	0.01%	96.93%
ORG:CORP	→ CITY + CORP JARGON	2	4820	0.01%	96.93%
DURATION	→ CITY + o	2	1184	0.01%	96.94%
MONEY	→ MONEY + o + MONEY + o + MONEY	2	3135	0.01%	96.95%

rule	children	count	of	% total	cumul've
ORG:CORP	→ GPE + o + CORP JARGON	2	4820	0.01%	96.96%
ORG:CORP	→ o + CITY + o + CORP JARGON	2	4820	0.01%	96.96%
ORG:CORP	→ o + CORP JARGON + o + CITY	2	4820	0.01%	96.97%
DURATION	→ YEAR + o + YEAR	2	1184	0.01%	96.98%
FACILITY	→ GPE	2	19	0.01%	96.99%
HURRICANE	→ FIRST	2	10	0.01%	97.00%
WAR	→ COUNTRY + o	2	16	0.01%	97.00%
DATE	→ QUAL + o + DURATION	2	4442	0.01%	97.01%
ENERGY	→ CARDINAL + UNIT	2	3	0.01%	97.02%
PER	→ HON + INI + MIDDLE + NAME	2	4378	0.01%	97.03%
DATE	→ QUAL + o + DURATION + REL	2	4442	0.01%	97.04%
ORG:CORP	→ o + COUNTRY + o + CORP JARGON	2	4820	0.01%	97.04%
PRODUCT:OTHER	→ LOCATION:OTHER + LOCATION:OTHER	2	78	0.01%	97.05%
INDEX	→ COUNTRY + o	2	128	0.01%	97.06%
NAME	→ NICKNAME	2	804	0.01%	97.07%
DATE	→ DURATION + REL + DATE	2	4442	0.01%	97.08%
CARDINAL	→ CARDINAL + UNIT	2	1772	0.01%	97.08%
LOCATION:OTHER	→ o + NAME	2	24	0.01%	97.09%
DURATION	→ SEASON + o + YEAR	2	1184	0.01%	97.10%
ORG:CORP	→ CITY + o + CITY + o + CORP JARGON	2	4820	0.01%	97.11%
STREET	→ o + ORDINAL + o	2	55	0.01%	97.11%
CARDINAL	→ UNIT + CARDINAL	2	1772	0.01%	97.12%
FIRST	→ CARDINAL + MULT	2	10	0.01%	97.13%
NAME	→ HON + NAME	2	804	0.01%	97.14%
GRP:ORG	→ CITY	2	102	0.01%	97.15%
NORP:OTHER	→ o + NATIONALITY	2	10	0.01%	97.15%
NAME	→ FIRST	2	804	0.01%	97.16%
PER	→ FIRST + NAME + NAMEMOD + o	2	4378	0.01%	97.17%
WOA	→ CITY + o	2	20	0.01%	97.18%
INDEX	→ NATIONALITY + o	2	128	0.01%	97.19%
ORG:CORP	→ ORDINAL + o + STATE	2	4820	0.01%	97.19%
RATE	→ MONEY + o + MONEY + o	2	485	0.01%	97.20%
RATE	→ MONEY + o + QUANTITY:2D	2	485	0.01%	97.21%
REGION	→ o + OCEAN	2	44	0.01%	97.22%
NORP:OTHER	→ OCEAN + o	2	10	0.01%	97.22%
STREET	→ NAME	2	55	0.01%	97.23%
DATE	→ SEASON + o + YEAR	2	4442	0.01%	97.24%
SPORTS EVENT	→ CITY + o	2	9	0.01%	97.25%
CARDINAL	→ CARDINAL + o + QUAL	2	1772	0.01%	97.26%

rule	children	count	of	% total	cumul've
DATE	→ DURATION + o + MONTH	2	4442	0.01%	97.26%
PER	→ INI + MIDDLE + NAME + NAMEMOD + o	2	4378	0.01%	97.27%
GPE	→ NORP:OTHER + o	2	3	0.01%	97.28%
AGE	→ o + CARDINAL + o	2	124	0.01%	97.29%
PERIODIC	→ o + DATE	2	56	0.01%	97.30%
PERIODIC	→ DURATION	2	56	0.01%	97.30%
INDEX	→ ORG:CORP + GOVERNMENT + o	2	128	0.01%	97.31%
ORG:CORP	→ REGION + NAME	2	4820	0.01%	97.32%
WOA	→ NAME	2	20	0.01%	97.33%
PRODUCT:OTHER	→ REGION	2	78	0.01%	97.34%
SPEED	→ CARDINAL + UNIT	2	10	0.01%	97.34%
PERCENT	→ QUAL + PERCENT + o + PERCENT	2	1702	0.01%	97.35%
PRODUCT:OTHER	→ NAME + LOCATION:OTHER	2	78	0.01%	97.36%
ORG:CORP	→ CITY + o + CORP JARGON + o	2	4820	0.01%	97.37%
QUANTITY:1D	→ CARDINAL + o + UNIT	2	47	0.01%	97.37%
WOA	→ PER + o	2	20	0.01%	97.38%
DATE	→ MONTH + o + DATE	2	4442	0.01%	97.39%
ORG:CORP	→ NATIONALITY + o + CORP JARGON + o	2	4820	0.01%	97.40%
HOSPITAL	→ CITY + o	2	7	0.01%	97.41%
ORG:OTHER	→ o + OCEAN + o	2	92	0.01%	97.41%
SEASON	→ SEASON + o + SEASON	2	3	0.01%	97.42%
TV SHOW	→ ANIMATE	2	26	0.01%	97.43%
ORG:CORP	→ o + GPE + CORP JARGON	2	4820	0.01%	97.44%
PERIODIC	→ REL + DURATION	2	56	0.01%	97.45%
ORG:CORP	→ o + NAME + o	2	4820	0.01%	97.45%
DATE	→ REL + ORDINAL + DURATION	2	4442	0.01%	97.46%
DATE	→ DAY + MONTH + NUMDAY	2	4442	0.01%	97.47%
NEWSPAPER	→ GRP:ORG + o	2	65	0.01%	97.48%
TV SHOW	→ CITY + o	2	26	0.01%	97.49%
PRODUCT:OTHER	→ STATE + o	2	78	0.01%	97.49%
ORG:CORP	→ CITY + NAME + CORP JARGON	2	4820	0.01%	97.50%
HOSPITAL	→ NAME + o	2	7	0.01%	97.51%
VEHICLE	→ ORG:CORP	2	54	0.01%	97.52%
ORG:CORP	→ NAME + o + REGION + o + CORP JARGON	2	4820	0.01%	97.52%
PER	→ INI + o + NICKNAME + o + NAME	2	4378	0.01%	97.53%
PER	→ HON + PER + o + PER	2	4378	0.01%	97.54%
DATE	→ YEAR + DATE	2	4442	0.01%	97.55%
DATE	→ DATE + o + YEAR	2	4442	0.01%	97.56%
ORG:CORP	→ CORP JARGON + o	2	4820	0.01%	97.56%

rule	children	count	of	% total	cumul've
STREET	→ STATE + o	2	55	0.01%	97.57%
DURATION	→ o + ORG:CORP	2	1184	0.01%	97.58%
DURATION	→ REL + CARDINAL + DURATION	2	1184	0.01%	97.59%
QUANTITY:2D	→ UNIT	2	15	0.01%	97.60%
GOVERNMENT	→ GPE	2	217	0.01%	97.60%
ORG:CORP	→ ORG:CORP + o + CORP JARGON + o	2	4820	0.01%	97.61%
DATE	→ MONTH + NUMDAY + o + DATE	2	4442	0.01%	97.62%
QUANTITY:3D	→ MULT + UNIT	2	45	0.01%	97.63%
DATE	→ ORDINAL	2	4442	0.01%	97.63%
ORG:CORP	→ o + CARDINAL	2	4820	0.01%	97.64%
DATE	→ DURATION + o + DAY	2	4442	0.01%	97.65%
GOVERNMENT	→ LOCATION:OTHER	2	217	0.01%	97.66%
ORG:CORP	→ NAME + o + COUNTRY	2	4820	0.01%	97.67%
PERIODIC	→ DAY	2	56	0.01%	97.67%
GRP:ORG	→ ORG:CORP + CORP JARGON	2	102	0.01%	97.68%
DATE	→ MONTH + NUMDAY + o + CARDINAL	2	4442	0.01%	97.69%
ORG:CORP	→ STATE + CORP JARGON	2	4820	0.01%	97.70%
ORG:CORP	→ OCEAN + ORDINAL	2	4820	0.01%	97.71%
NEWSPAPER	→ ORG:CORP + o	2	65	0.01%	97.71%
ORG:OTHER	→ o + NATIONALITY + o	2	92	0.01%	97.72%
NEWSPAPER	→ NAME + o	2	65	0.01%	97.73%
RATE	→ RATE + o + RATE	2	485	0.01%	97.74%
ORG:CORP	→ CITY + CORP JARGON + o	2	4820	0.01%	97.75%
DATE	→ SEASON + YEAR	2	4442	0.01%	97.75%
BOOK	→ NATIONALITY + o	2	12	0.01%	97.76%
FACILITY	→ CITY + o	2	19	0.01%	97.77%
NORP:OTHER	→ o + NORP:OTHER	2	10	0.01%	97.78%
ORG:OTHER	→ NAME	2	92	0.01%	97.78%
TV SHOW	→ STREET	2	26	0.01%	97.79%
ORG:EDU	→ GPE + o	2	122	0.01%	97.80%
UNIT	→ NORP:OTHER + UNIT	2	69	0.01%	97.81%
ORG:CORP	→ STATE + o + CORP JARGON + o	2	4820	0.01%	97.82%
DATE	→ QUAL + MONTH	2	4442	0.01%	97.82%
MONEY	→ REL + MONEY	2	3135	0.01%	97.83%
ORG:OTHER	→ ORG:OTHER + o	2	92	0.01%	97.84%
AGE	→ o + CARDINAL + o + CARDINAL	2	124	0.01%	97.85%
LANGUAGE	→ CARDINAL	2	5	0.01%	97.86%
DURATION	→ DURATION + QUAL	2	1184	0.01%	97.86%
ORG:CORP	→ o + STATE + o	2	4820	0.01%	97.87%

rule	children	count	of	% total	cumul've
ORG:CORP	→ o + OCEAN + CORP JARGON	2	4820	0.01%	97.88%
DATE	→ DURATION + REL + EVENT	2	4442	0.01%	97.89%
QUANTITY:1D	→ CARDINAL	2	47	0.01%	97.89%
LANGUAGE	→ AGE + o + AGE	1	5	0.00%	97.90%
MUSEUM	→ CITY + o	1	3	0.00%	97.90%
CARDINAL	→ CARDINAL + o + CARDINAL + MULT	1	1772	0.00%	97.91%
AGE	→ QUAL + AGE	1	124	0.00%	97.91%
DURATION	→ o + YEAR + o + YEAR	1	1184	0.00%	97.91%
DURATION	→ CARDINAL + DURATION + QUAL	1	1184	0.00%	97.92%
ORG:CORP	→ NAME + NAME + NAME + CORP JARGON	1	4820	0.00%	97.92%
EVENT	→ HOTEL	1	47	0.00%	97.93%
INDEX	→ DATE + o	1	128	0.00%	97.93%
PAINTING	→ NAME	1	3	0.00%	97.93%
ORG:RELIGIOUS	→ GPE + o	1	10	0.00%	97.94%
INDEX	→ GRP:ORG	1	128	0.00%	97.94%
UNIT	→ COUNTRY + UNIT	1	69	0.00%	97.95%
EVENT	→ BUILDING	1	47	0.00%	97.95%
COUNTRY	→ o + GPE + o + COUNTRY	1	1	0.00%	97.95%
NAME	→ INI + o + FIRST + INI + NAME	1	804	0.00%	97.96%
BOOK	→ NORP:OTHER + o	1	12	0.00%	97.96%
SPORTS TEAM	→ GPE + o	1	33	0.00%	97.97%
ORG:CORP	→ NAME + CITY	1	4820	0.00%	97.97%
ORG:CORP	→ RIVER + CORP JARGON	1	4820	0.00%	97.97%
PRODUCT:OTHER	→ o + CARDINAL + o	1	78	0.00%	97.98%
DURATION	→ DURATION + REL + DAY	1	1184	0.00%	97.98%
PERIODIC	→ ORDINAL + DURATION	1	56	0.00%	97.99%
LAW	→ NATIONALITY + o	1	75	0.00%	97.99%
WAR	→ NATIONALITY + o	1	16	0.00%	97.99%
EVENT	→ NATIONALITY + o	1	47	0.00%	98.00%
OCEAN	→ NAME + o	1	1	0.00%	98.00%
DURATION	→ REL + DATE	1	1184	0.00%	98.01%
YEAR	→ YEAR + o + YEAR	1	2	0.00%	98.01%
HOTEL	→ ORG:CORP + o	1	7	0.00%	98.01%
IPOINTS	→ UNIT	1	492	0.00%	98.02%
ORG:CORP	→ o + NATIONALITY + ORDINAL + CITY + CORP JARGON + o	1	4820	0.00%	98.02%
NATIONALITY	→ NATIONALITY + o + NATIONALITY	1	1	0.00%	98.03%
FACILITY	→ o + STATE + o	1	19	0.00%	98.03%
QUANTITY:1D	→ QUAL + CARDINAL + o + CARDINAL + UNIT	1	47	0.00%	98.03%
MONTH	→ HON + FIRST + NAME	1	5	0.00%	98.04%

rule	children	count	of	% total	cumul've
DATE	→ CARDINAL + o + REL + CARDINAL + DURATION	1	4442	0.00%	98.04%
DATE	→ DAY + o + DATE + o + YEAR	1	4442	0.00%	98.04%
CITY	→ GPE + o + CARDINAL	1	6	0.00%	98.05%
DATE	→ MONTH + o + MONTH + o + YEAR	1	4442	0.00%	98.05%
ORG:CORP	→ COUNTRY + o + CITY + o + CORP JARGON + o	1	4820	0.00%	98.06%
DURATION	→ ORDINAL + CARDINAL	1	1184	0.00%	98.06%
PER	→ HON + FIRST + LAST	1	4378	0.00%	98.06%
DATE	→ ORDINAL + CARDINAL + o + DATE	1	4442	0.00%	98.07%
ORG:CORP	→ o + NAME + o + CORP JARGON + o	1	4820	0.00%	98.07%
WEIGHT	→ QUAL + o + WEIGHT	1	83	0.00%	98.08%
TV SHOW	→ CARDINAL + DURATION	1	26	0.00%	98.08%
EVENT	→ CITY + o	1	47	0.00%	98.08%
ORG:CORP	→ o + NORP:OTHER + o	1	4820	0.00%	98.09%
ORG:POLITICAL	→ NAME + o	1	13	0.00%	98.09%
DATE	→ REL + TIME	1	4442	0.00%	98.10%
DATE	→ DURATION + o + YEAR + o + YEAR	1	4442	0.00%	98.10%
VEHICLE	→ o + CARDINAL	1	54	0.00%	98.10%
ORG:CORP	→ GRP:PER + o + CORP JARGON	1	4820	0.00%	98.11%
BUILDING	→ CITY + o + CARDINAL	1	29	0.00%	98.11%
VEHICLE	→ DATE + CARDINAL	1	54	0.00%	98.12%
PRODUCT:OTHER	→ CARDINAL	1	78	0.00%	98.12%
WEIGHT	→ MULT + o + UNIT	1	83	0.00%	98.12%
ORG:CORP	→ FUND + CORP JARGON	1	4820	0.00%	98.13%
NEWSPAPER	→ o + GRP:ORG + NAME	1	65	0.00%	98.13%
DURATION	→ CARDINAL + REL + DURATION	1	1184	0.00%	98.14%
WOA	→ o + GOVERNMENT + o	1	20	0.00%	98.14%
TV SHOW	→ o + COUNTRY	1	26	0.00%	98.14%
ORG:CORP	→ o + GPE + o	1	4820	0.00%	98.15%
PER	→ HON + FIRST + o + NAME	1	4378	0.00%	98.15%
FUND	→ CITY + o	1	15	0.00%	98.16%
DATE	→ REL + DURATION + o	1	4442	0.00%	98.16%
ORG:CORP	→ ORDINAL + o + CORP JARGON + o	1	4820	0.00%	98.16%
RATE	→ MONEY + o + CARDINAL	1	485	0.00%	98.17%
BOOK	→ NORP:OTHER + o + COUNTRY + o	1	12	0.00%	98.17%
ORG:CORP	→ ORDINAL + CITY + o + COUNTRY + o + CORP JARGON	1	4820	0.00%	98.17%
PERIODIC	→ REL + o + PERIODIC	1	56	0.00%	98.18%
CARDINAL	→ QUAL + CARDINAL + MULT	1	1772	0.00%	98.18%
ORG:CORP	→ NAME + o + CONTINENT + CORP JARGON	1	4820	0.00%	98.19%
ORG:CORP	→ NAME + CONTINENT + CORP JARGON	1	4820	0.00%	98.19%

rule	children	count	of	% total	cumul've
DATE	→ SEASON + o	1	4442	0.00%	98.19%
DATE:OTHER	→ CARDINAL + DURATION	1	12	0.00%	98.20%
EVENT	→ o + CITY	1	47	0.00%	98.20%
ORG:CORP	→ NEWSPAPER + NAME	1	4820	0.00%	98.21%
QUANTITY:1D	→ CARDINAL + QUANTITY:1D	1	47	0.00%	98.21%
STADIUM	→ CITY + o	1	3	0.00%	98.21%
ORG:OTHER	→ COUNTRY + o + COUNTRY + o	1	92	0.00%	98.22%
WOA	→ NATIONALITY + o	1	20	0.00%	98.22%
PER	→ HON + o + FIRST + o + NAME	1	4378	0.00%	98.23%
PRODUCT:OTHER	→ ANIMATE	1	78	0.00%	98.23%
SPORTS SEASON	→ DATE + o	1	1	0.00%	98.23%
DATE	→ MONEY + o	1	4442	0.00%	98.24%
AGE	→ AGE + o + QUAL	1	124	0.00%	98.24%
DURATION	→ QUAL + o + DATE	1	1184	0.00%	98.25%
DATE	→ SEASON + o + REL	1	4442	0.00%	98.25%
SONG	→ FIRST + INI + NAME	1	1	0.00%	98.25%
PRODUCT:OTHER	→ NAME + o + LOCATION:OTHER	1	78	0.00%	98.26%
PER	→ INI + NAME + NAME	1	4378	0.00%	98.26%
DURATION	→ DATE + o + DATE	1	1184	0.00%	98.27%
BROADCASTER	→ NAME + o	1	56	0.00%	98.27%
RATE	→ RATE + QUAL	1	485	0.00%	98.27%
PRODUCT:OTHER	→ ORG:CORP + o + UNIT	1	78	0.00%	98.28%
NAME	→ NAME + NAME + NAME + NAME	1	804	0.00%	98.28%
DATE	→ DATE + DATE	1	4442	0.00%	98.29%
REL	→ REL + o + REL	1	3	0.00%	98.29%
ORG:RELIGIOUS	→ SUBURB + o	1	10	0.00%	98.29%
DAY	→ ORDINAL + DURATION + o + DATE	1	7	0.00%	98.30%
DATE	→ DURATION + DAY	1	4442	0.00%	98.30%
ANIMATE	→ HON + NAME	1	9	0.00%	98.30%
INI	→ ORG:CORP + o	1	1	0.00%	98.31%
GOVERNMENT	→ NATIONALITY + ORDINAL + o	1	217	0.00%	98.31%
GOVERNMENT	→ GOVERNMENT + o + GOVERNMENT	1	217	0.00%	98.32%
DATE	→ DAY + o	1	4442	0.00%	98.32%
DATE	→ REL + o	1	4442	0.00%	98.32%
DATE	→ YEAR + ORDINAL + CARDINAL	1	4442	0.00%	98.33%
DATE	→ REL + o + REL + DURATION	1	4442	0.00%	98.33%
DATE	→ CARDINAL + DURATION + o + YEAR	1	4442	0.00%	98.34%
MONEY	→ o + MONEY	1	3135	0.00%	98.34%
ORG:CORP	→ o + CITY + o	1	4820	0.00%	98.34%

rule	children	count	of	% total	cumul've
DATE	→ CARDINAL + DATE	1	4442	0.00%	98.35%
ORG:CORP	→ REGION + o + CORP JARGON + o	1	4820	0.00%	98.35%
NICKNAME	→ o + NATIONALITY	1	4	0.00%	98.36%
ORG:CORP	→ BUILDING + o	1	4820	0.00%	98.36%
FACILITY	→ NAME + ORG:EDU + o	1	19	0.00%	98.36%
CITY	→ CITY + o + CITY	1	6	0.00%	98.37%
MONEY	→ MULT	1	3135	0.00%	98.37%
TIME	→ DURATION + REL	1	17	0.00%	98.38%
ORG:OTHER	→ o + WOA	1	92	0.00%	98.38%
SUBURB	→ o + CARDINAL	1	2	0.00%	98.38%
DATE	→ TIME + o + DATE	1	4442	0.00%	98.39%
ORG:CORP	→ NATIONALITY + OCEAN	1	4820	0.00%	98.39%
DATE	→ REL + o + WAR	1	4442	0.00%	98.40%
GOVERNMENT	→ GPE + o	1	217	0.00%	98.40%
MONEY	→ MULT + o + UNIT	1	3135	0.00%	98.40%
STADIUM	→ CITY	1	3	0.00%	98.41%
TV SHOW	→ o + DATE:OTHER	1	26	0.00%	98.41%
HON	→ HON + o + HON	1	1	0.00%	98.42%
AGE	→ QUAL + o + AGE	1	124	0.00%	98.42%
FUND	→ NATIONALITY + o	1	15	0.00%	98.42%
PRODUCT:OTHER	→ CARDINAL + o	1	78	0.00%	98.43%
PERIODIC	→ o + DAY	1	56	0.00%	98.43%
MONEY	→ FOLD + o + MONEY	1	3135	0.00%	98.44%
GRP:ORG	→ REGION	1	102	0.00%	98.44%
HURRICANE	→ NAME	1	10	0.00%	98.44%
ORG:CORP	→ ORG:CORP + o + COUNTRY + CORP JARGON	1	4820	0.00%	98.45%
AWARD	→ NAME	1	5	0.00%	98.45%
ORG:CORP	→ CARDINAL + GRP:ORG	1	4820	0.00%	98.45%
DATE	→ MONTH + CARDINAL + o + CARDINAL	1	4442	0.00%	98.46%
QUANTITY:OTHER	→ CARDINAL + o + CARDINAL + o	1	11	0.00%	98.46%
ORG:CORP	→ o + NATIONALITY + o + GPE + CORP JARGON + o	1	4820	0.00%	98.47%
ORG:CORP	→ ORDINAL + CITY + o	1	4820	0.00%	98.47%
VEHICLE	→ DATE + o + ORG:CORP + CARDINAL	1	54	0.00%	98.47%
DATE:OTHER	→ o + DATE	1	12	0.00%	98.48%
LOCATION:OTHER	→ STATE + o	1	24	0.00%	98.48%
ORG:CORP	→ o + NORP:OTHER + COUNTRY + CORP JARGON + o	1	4820	0.00%	98.49%
DAY	→ DAY + o + DAY	1	7	0.00%	98.49%
POINTS	→ CARDINAL + o	1	8	0.00%	98.49%
ORG:CORP	→ NAME + o + NAME	1	4820	0.00%	98.50%

rule	children	count	of	% total	cumul've
CARDINAL	→ CARDINAL + o	1	1772	0.00%	98.50%
QUANTITY:3D	→ QUAL + CARDINAL + MULT + UNIT	1	45	0.00%	98.51%
ORG:CORP	→ HOSPITAL + CORP JARGON	1	4820	0.00%	98.51%
AWARD	→ o + DURATION	1	5	0.00%	98.51%
PER	→ LAST	1	4378	0.00%	98.52%
DATE	→ DAY + o + MONTH + NUMDAY	1	4442	0.00%	98.52%
GRP:LOC	→ NAME + o	1	4	0.00%	98.53%
NEWSPAPER	→ o + NATIONALITY	1	65	0.00%	98.53%
ORG:POLITICAL	→ o + NATIONALITY	1	13	0.00%	98.53%
DATE	→ YEAR + EVENT	1	4442	0.00%	98.54%
RATE	→ MONEY + o + ORG:CORP + o	1	485	0.00%	98.54%
MONEY	→ UNIT + FIRST	1	3135	0.00%	98.55%
FOLD	→ CARDINAL + o + CARDINAL	1	41	0.00%	98.55%
FUND	→ ORG:CORP + o	1	15	0.00%	98.55%
ORDINAL	→ MONEY + o + UNIT	1	7	0.00%	98.56%
ORG:CORP	→ NAME + OCEAN + o + CORP JARGON	1	4820	0.00%	98.56%
PERIODIC	→ o + DURATION + o + MONTH	1	56	0.00%	98.57%
AIRPORT	→ CITY + o	1	7	0.00%	98.57%
ORG:CORP	→ NAME + o + CORP JARGON + o + COUNTRY	1	4820	0.00%	98.57%
REGION	→ CITY + o	1	44	0.00%	98.58%
DATE	→ YEAR + o + DATE	1	4442	0.00%	98.58%
DATE	→ DURATION + DURATION + DATE	1	4442	0.00%	98.58%
DATE	→ DAY + MONTH + NUMDAY + o + YEAR	1	4442	0.00%	98.59%
MONTH	→ QUAL + UNIT + CARDINAL + MULT	1	5	0.00%	98.59%
DATE	→ DAY + o + DATE	1	4442	0.00%	98.60%
RATE	→ MONEY + o + RATE	1	485	0.00%	98.60%
ORG:CORP	→ GRP:LOC	1	4820	0.00%	98.60%
SPORTS EVENT	→ DATE + o	1	9	0.00%	98.61%
WEIGHT	→ QUAL + WEIGHT	1	83	0.00%	98.61%
ORG:CORP	→ NORP:OTHER + o + CORP JARGON	1	4820	0.00%	98.62%
NAME	→ HON + HON + NAME	1	804	0.00%	98.62%
ORG:CORP	→ COUNTRY + o + CORP JARGON	1	4820	0.00%	98.62%
FACILITY	→ CITY + o + CARDINAL	1	19	0.00%	98.63%
ORG:RELIGIOUS	→ NAME	1	10	0.00%	98.63%
EVENT	→ ORDINAL + o + EVENT	1	47	0.00%	98.64%
ORG:CORP	→ CONTINENT + o + CORP JARGON + o	1	4820	0.00%	98.64%
RATE	→ QUANTITY:2D + o	1	485	0.00%	98.64%
DURATION	→ QUAL + QUAL + DURATION	1	1184	0.00%	98.65%
PERIODIC	→ CARDINAL + PERIODIC	1	56	0.00%	98.65%

rule	children	count	of	% total	cumul've
DATE	→ QUAL + REL + DURATION	1	4442	0.00%	98.66%
BOOK	→ o + PER	1	12	0.00%	98.66%
DATE	→ REL + DURATION + o + DATE	1	4442	0.00%	98.66%
PER	→ NICKNAME + o + NAME	1	4378	0.00%	98.67%
PRODUCT:OTHER	→ ORG:OTHER + o	1	78	0.00%	98.67%
WOA	→ o + PER + o	1	20	0.00%	98.68%
RATE	→ MONEY + o + UNIT + QUAL	1	485	0.00%	98.68%
DATE	→ DURATION + REL + DATE + o + IPOINTS + o	1	4442	0.00%	98.68%
TV SHOW	→ CITY	1	26	0.00%	98.69%
PERCENT	→ REL + o + PERCENT	1	1702	0.00%	98.69%
REL	→ ORDINAL	1	3	0.00%	98.70%
PRODUCT:OTHER	→ NAME + o + LOCATION:OTHER + o	1	78	0.00%	98.70%
NEWSPAPER	→ CITY + o + STATE + o	1	65	0.00%	98.70%
DAY	→ CARDINAL + MULT	1	7	0.00%	98.71%
ORG:CORP	→ BROADCASTER + o	1	4820	0.00%	98.71%
PER	→ ORG:CORP	1	4378	0.00%	98.71%
NAME	→ HON + FIRST + NAME	1	804	0.00%	98.72%
RATE	→ MONEY + UNIT	1	485	0.00%	98.72%
DATE	→ REL + o + DAY	1	4442	0.00%	98.73%
PLAY	→ o + CITY	1	1	0.00%	98.73%
EVENT	→ MONTH + DURATION	1	47	0.00%	98.73%
GRP:PER	→ o + NAME	1	50	0.00%	98.74%
DATE	→ YEAR + o	1	4442	0.00%	98.74%
AIRPORT	→ SUBURB + o	1	7	0.00%	98.75%
VEHICLE	→ NAME	1	54	0.00%	98.75%
ORG:OTHER	→ CITY + o + COUNTRY	1	92	0.00%	98.75%
ORG:CORP	→ NAME + CORP JARGON + o + COUNTRY + o	1	4820	0.00%	98.76%
DURATION	→ MONEY + o + QUANTITY:OTHER	1	1184	0.00%	98.76%
DATE	→ SEASON + o + DATE	1	4442	0.00%	98.77%
ORG:CORP	→ o + OCEAN + o	1	4820	0.00%	98.77%
DATE:OTHER	→ REL + DURATION + DURATION	1	12	0.00%	98.77%
SEASON	→ NORP:OTHER + o	1	3	0.00%	98.78%
INDEX	→ ORG:CORP + o + CARDINAL	1	128	0.00%	98.78%
ORG:CORP	→ RIVER	1	4820	0.00%	98.79%
ORG:CORP	→ LOCATION:OTHER + o + CORP JARGON + o	1	4820	0.00%	98.79%
EVENT	→ SEASON + o	1	47	0.00%	98.79%
EVENT	→ MONTH + NUMDAY + o + CITY	1	47	0.00%	98.80%
EVENT	→ ORG:CORP + EVENT + o	1	47	0.00%	98.80%
PER	→ FIRST + INI + o + NICKNAME + o + NAME	1	4378	0.00%	98.81%

rule	children	count	of	% total	cumul've
ORG:CORP	→ o + NATIONALITY + ORDINAL + CITY + CORP JARGON	1	4820	0.00%	98.81%
DATE	→ ORDINAL + DURATION + o + DATE + o + MONTH	1	4442	0.00%	98.81%
WOA	→ FIRST + o + NATIONALITY + o	1	20	0.00%	98.82%
QUANTITY:3D	→ CARDINAL + WEIGHT + UNIT	1	45	0.00%	98.82%
ORG:CORP	→ NAME + CITY + o	1	4820	0.00%	98.83%
LOCATION:OTHER	→ o + STATE	1	24	0.00%	98.83%
ORG:CORP	→ INI + o + CORP JARGON	1	4820	0.00%	98.83%
DATE	→ DURATION + o + DATE + o + YEAR	1	4442	0.00%	98.84%
DATE	→ YEAR + o + ORDINAL + DURATION	1	4442	0.00%	98.84%
TIME	→ QUAL + TIME + o + TIME	1	17	0.00%	98.85%
DATE	→ REL + SPORTS SEASON	1	4442	0.00%	98.85%
WOA	→ NAME + o	1	20	0.00%	98.85%
ORG:CORP	→ CITY + o + OCEAN	1	4820	0.00%	98.86%
RATE	→ NAME	1	485	0.00%	98.86%
WOA	→ DATE + o	1	20	0.00%	98.86%
RATE	→ PERCENT + DURATION	1	485	0.00%	98.87%
HOTEL	→ NORP:OTHER + o	1	7	0.00%	98.87%
WOA	→ GOVERNMENT + o	1	20	0.00%	98.88%
SPORTS EVENT	→ CITY + CARDINAL	1	9	0.00%	98.88%
ORG:CORP	→ NAME + o + CORP JARGON + o + COUNTRY + o	1	4820	0.00%	98.88%
INDEX	→ CITY + o	1	128	0.00%	98.89%
ORG:CORP	→ o + COUNTRY + CORP JARGON + CORP JARGON	1	4820	0.00%	98.89%
ORG:OTHER	→ NEWSPAPER	1	92	0.00%	98.90%
PER	→ HON + NAME + FIRST + MIDDLE	1	4378	0.00%	98.90%
ORG:RELIGIOUS	→ ORG:RELIGIOUS + o	1	10	0.00%	98.90%
LAW	→ YEAR + o	1	75	0.00%	98.91%
PERCENT	→ QUAL + PER	1	1702	0.00%	98.91%
DATE	→ DURATION + o + MONTH + NUMDAY + o + YEAR	1	4442	0.00%	98.92%
MONEY	→ QUAL + CARDINAL	1	3135	0.00%	98.92%
WAR	→ COUNTRY + o + COUNTRY + o	1	16	0.00%	98.92%
HOSPITAL	→ STATE + o	1	7	0.00%	98.93%
NORP:POLITICAL	→ NATIONALITY + o	1	1	0.00%	98.93%
PERCENT	→ QUAL + o + PERCENT	1	1702	0.00%	98.94%
ORG:CORP	→ NAME + o + CONTINENT + CORP JARGON + o	1	4820	0.00%	98.94%
DATE	→ DURATION + o + CITY + DAY	1	4442	0.00%	98.94%
DATE	→ DURATION + o + DURATION + o + MONTH + NUMDAY	1	4442	0.00%	98.95%
BOOK	→ o + CARDINAL + o	1	12	0.00%	98.95%
YEAR	→ QUAL + o + IPOINTS	1	2	0.00%	98.96%
DATE	→ ORDINAL + CARDINAL	1	4442	0.00%	98.96%

rule	children	count	of	% total	cumul've
ORG:OTHER	→ REGION + o	1	92	0.00%	98.96%
TV SHOW	→ CARDINAL + o	1	26	0.00%	98.97%
NAME	→ NAME + NAME + NAME + NAME + o + NAME	1	804	0.00%	98.97%
ORG:CORP	→ o + CONTINENT + o + CORP JARGON	1	4820	0.00%	98.98%
DATE	→ DURATION + REL + DAY	1	4442	0.00%	98.98%
ORG:CORP	→ CITY + o + OCEAN + CORP JARGON	1	4820	0.00%	98.98%
NAME	→ INI	1	804	0.00%	98.99%
PERIODIC	→ ORDINAL + o + PERIODIC	1	56	0.00%	98.99%
MONEY	→ QUAL + CARDINAL + UNIT	1	3135	0.00%	98.99%
DATE	→ DATE + ORDINAL + DURATION	1	4442	0.00%	99.00%
DATE	→ PERIODIC + DURATION	1	4442	0.00%	99.00%
DATE	→ QUAL + TIME	1	4442	0.00%	99.01%
ORG:CORP	→ NAME + o + COUNTRY + o	1	4820	0.00%	99.01%
PERIODIC	→ DATE + o + DATE	1	56	0.00%	99.01%
AGE	→ CARDINAL + o	1	124	0.00%	99.02%
LOCATION:OTHER	→ o + CARDINAL	1	24	0.00%	99.02%
NAME	→ NAME + o + PER	1	804	0.00%	99.03%
ORG:CORP	→ OCEAN + ORDINAL + o	1	4820	0.00%	99.03%
CARDINAL	→ CARDINAL + o + FIRST	1	1772	0.00%	99.03%
ORG:CORP	→ ORDINAL + o + CITY	1	4820	0.00%	99.04%
SPORTS EVENT	→ SEASON + o	1	9	0.00%	99.04%
PERCENT	→ PERCENT + o + QUAL	1	1702	0.00%	99.05%
CARDINAL	→ CARDINAL + o + MULT	1	1772	0.00%	99.05%
WOA	→ NAME + o + NAME	1	20	0.00%	99.05%
LOCATION:OTHER	→ o + LOCATION:OTHER	1	24	0.00%	99.06%
ORG:CORP	→ NAME + o + CORP JARGON + o + CORP JARGON	1	4820	0.00%	99.06%
PER	→ NAME + o + NICKNAME	1	4378	0.00%	99.07%
GOVERNMENT	→ o + STATE + o	1	217	0.00%	99.07%
LAW	→ o + CARDINAL + o + LAW	1	75	0.00%	99.07%
CONCERT	→ PER + o	1	1	0.00%	99.08%
DATE:OTHER	→ o + DURATION	1	12	0.00%	99.08%
ORG:OTHER	→ o + COUNTRY + o	1	92	0.00%	99.09%
IPOINTS	→ CARDINAL + o	1	492	0.00%	99.09%
DAY	→ ORDINAL + DURATION	1	7	0.00%	99.09%
DATE	→ REL + DATE + o + DATE	1	4442	0.00%	99.10%
WOA	→ o + ORG:CORP + o + ORG:CORP + o	1	20	0.00%	99.10%
TIME	→ TIME + QUAL	1	17	0.00%	99.11%
PERCENT	→ CARDINAL + o	1	1702	0.00%	99.11%
DATE	→ DURATION + o + DURATION + o + DURATION	1	4442	0.00%	99.11%

rule	children	count	of	% total	cumul've
PER	→ CARDINAL + UNIT	1	4378	0.00%	99.12%
NEWSPAPER	→ REGION + o	1	65	0.00%	99.12%
DAY	→ SEASON	1	7	0.00%	99.12%
DATE	→ TIME	1	4442	0.00%	99.13%
ANIMATE	→ NAME + o	1	9	0.00%	99.13%
VEHICLE	→ ORG:CORP + VEHICLE	1	54	0.00%	99.14%
NEWSPAPER	→ o + CITY + o	1	65	0.00%	99.14%
ORG:CORP	→ COUNTRY + CONTINENT + o	1	4820	0.00%	99.14%
FACILITY	→ NAME + o	1	19	0.00%	99.15%
WOA	→ o + YEAR	1	20	0.00%	99.15%
MONEY	→ FIRST + UNIT	1	3135	0.00%	99.16%
ORG:RELIGIOUS	→ o + COUNTRY	1	10	0.00%	99.16%
FUND	→ ORG:CORP + o + MONEY + FUND	1	15	0.00%	99.16%
REL	→ MONEY + o	1	3	0.00%	99.17%
BUILDING	→ SUBURB + o	1	29	0.00%	99.17%
ORG:CORP	→ STATE + o + COUNTRY + CORP JARGON	1	4820	0.00%	99.18%
BROADCASTER	→ CITY + o	1	56	0.00%	99.18%
WEIGHT	→ WEIGHT + QUAL	1	83	0.00%	99.18%
EVENT	→ NAME + o	1	47	0.00%	99.19%
LANGUAGE	→ o + CARDINAL	1	5	0.00%	99.19%
WOA	→ o + EVENT	1	20	0.00%	99.20%
DATE	→ FIRST + DAY	1	4442	0.00%	99.20%
DURATION	→ PERIODIC	1	1184	0.00%	99.20%
ORG:CORP	→ CITY + CORP JARGON + CORP JARGON + o	1	4820	0.00%	99.21%
ORG:CORP	→ NAME + NAME + NAME	1	4820	0.00%	99.21%
NEWSPAPER	→ ORG:EDU + o	1	65	0.00%	99.22%
PERIODIC	→ DURATION + o + DATE	1	56	0.00%	99.22%
DATE	→ DAY + o + ORDINAL	1	4442	0.00%	99.22%
DATE	→ DURATION + YEAR	1	4442	0.00%	99.23%
DURATION	→ SEASON + o + SEASON	1	1184	0.00%	99.23%
ORG:CORP	→ o + NAME + o + CORP JARGON	1	4820	0.00%	99.24%
AIRPORT	→ NAME	1	7	0.00%	99.24%
PER	→ INI + MIDDLE + LAST + NAMEMOD	1	4378	0.00%	99.24%
HOTEL	→ CITY + o	1	7	0.00%	99.25%
WOA	→ COUNTRY + o	1	20	0.00%	99.25%
TIME	→ QUAL + TIME	1	17	0.00%	99.25%
ORG:CORP	→ NAME + OCEAN + CORP JARGON	1	4820	0.00%	99.26%
EVENT	→ STREET	1	47	0.00%	99.26%
NAME	→ MONEY + o + QUANTITY:3D	1	804	0.00%	99.27%

rule	children	count	of	% total	cumul've
DATE	→ REL + YEAR + DURATION	1	4442	0.00%	99.27%
DURATION	→ CARDINAL + GOVERNMENT + DURATION	1	1184	0.00%	99.27%
EVENT	→ NATIONALITY + o + DURATION	1	47	0.00%	99.28%
SUBURB	→ NAME	1	2	0.00%	99.28%
ORG:OTHER	→ NATIONALITY + ORG:OTHER	1	92	0.00%	99.29%
AIRPORT	→ MONEY + o	1	7	0.00%	99.29%
RATE	→ MONEY + o + QUANTITY:3D + o	1	485	0.00%	99.29%
GRP:ORG	→ CORP JARGON	1	102	0.00%	99.30%
ORG:EDU	→ o + REGION	1	122	0.00%	99.30%
PER	→ FIRST + o + NICKNAME + o + NAME	1	4378	0.00%	99.31%
STADIUM	→ NORP:OTHER + o	1	3	0.00%	99.31%
CAPITAL	→ CITY	1	1	0.00%	99.31%
RATE	→ MONEY + o + QUAL + UNIT	1	485	0.00%	99.32%
ORG:CORP	→ COUNTRY + o + CORP JARGON + o	1	4820	0.00%	99.32%
LAW	→ o + DATE	1	75	0.00%	99.33%
BOOK	→ o + ORG:POLITICAL + o	1	12	0.00%	99.33%
VEHICLE	→ DATE + o + CARDINAL	1	54	0.00%	99.33%
WOA	→ o + NAME + o	1	20	0.00%	99.34%
GRP:ORG	→ CITY + o + CARDINAL	1	102	0.00%	99.34%
NEWSPAPER	→ o + CITY	1	65	0.00%	99.35%
PERIODIC	→ CARDINAL + DURATION	1	56	0.00%	99.35%
DATE	→ REL + DURATION + DURATION	1	4442	0.00%	99.35%
DURATION	→ REL + CARDINAL	1	1184	0.00%	99.36%
DATE	→ MONTH + o + YEAR	1	4442	0.00%	99.36%
PAINTING	→ o + CARDINAL	1	3	0.00%	99.37%
FACILITY	→ ORG:CORP + o	1	19	0.00%	99.37%
PER	→ FIRST + INI + NAME + NAMEMOD + o	1	4378	0.00%	99.37%
DATE	→ EVENT + YEAR	1	4442	0.00%	99.38%
RATE	→ DURATION	1	485	0.00%	99.38%
RATE	→ CARDINAL + NATIONALITY + o + DURATION	1	485	0.00%	99.39%
RATE	→ QUAL + MONEY + o + UNIT	1	485	0.00%	99.39%
SPEED	→ QUANTITY:1D + o + DURATION	1	10	0.00%	99.39%
PERIODIC	→ DURATION + o	1	56	0.00%	99.40%
ORG:CORP	→ o + CONTINENT	1	4820	0.00%	99.40%
TIME	→ TIME + o + CITY + o	1	17	0.00%	99.40%
PRODUCT:OTHER	→ ORG:CORP + CARDINAL	1	78	0.00%	99.41%
DATE	→ REL + DURATION + DAY	1	4442	0.00%	99.41%
RATE	→ UNIT + RATE	1	485	0.00%	99.42%
ORG:EDU	→ o + NATIONALITY + o	1	122	0.00%	99.42%

rule	children	count	of	% total	cumul've
PER	→ HON + FIRST + MIDDLE + NAME	1	4378	0.00%	99.42%
SPORTS TEAM	→ STATE + o	1	33	0.00%	99.43%
DURATION	→ CARDINAL + CARDINAL + DURATION	1	1184	0.00%	99.43%
DAY	→ REL + DAY	1	7	0.00%	99.44%
GOVERNMENT	→ NAME + CORP JARGON	1	217	0.00%	99.44%
ORG:CORP	→ NAME + o + CITY	1	4820	0.00%	99.44%
ORG:OTHER	→ o + CONTINENT	1	92	0.00%	99.45%
DATE	→ DATE + o + DURATION	1	4442	0.00%	99.45%
PERIODIC	→ o + DAY + DURATION	1	56	0.00%	99.46%
PER	→ FIRST + NAME + NAME	1	4378	0.00%	99.46%
PERCENT	→ CARDINAL + UNIT + o + CARDINAL + UNIT	1	1702	0.00%	99.46%
NEWSPAPER	→ LOCATION:OTHER + o	1	65	0.00%	99.47%
ORG:CORP	→ FIRST + LAST + o + CORP JARGON	1	4820	0.00%	99.47%
QUANTITY:1D	→ QUANTITY:1D + o + QUANTITY:1D	1	47	0.00%	99.48%
DURATION	→ CARDINAL + o	1	1184	0.00%	99.48%
DAY	→ REL + DURATION	1	7	0.00%	99.48%
GPE	→ o + FIRST + o	1	3	0.00%	99.49%
DURATION	→ QUAL + CARDINAL + DURATION	1	1184	0.00%	99.49%
PAINTING	→ o + NATIONALITY + o	1	3	0.00%	99.50%
LANGUAGE	→ CARDINAL + DURATION + o	1	5	0.00%	99.50%
RATE	→ CARDINAL + o	1	485	0.00%	99.50%
NAME	→ NAME + o + NORP:POLITICAL + o + STATE + o + NAME	1	804	0.00%	99.51%
EVENT	→ ORG:OTHER + o	1	47	0.00%	99.51%
ORG:CORP	→ ORDINAL + NATIONALITY + o + CORP JARGON	1	4820	0.00%	99.52%
GOVERNMENT	→ NATURAL DISASTER + o	1	217	0.00%	99.52%
RATE	→ IPOINTS + o + DURATION	1	485	0.00%	99.52%
DATE	→ MONTH + DURATION + o + YEAR	1	4442	0.00%	99.53%
IPOINTS	→ QUAL + o + IPOINTS	1	492	0.00%	99.53%
TIME	→ QUAL + DURATION	1	17	0.00%	99.53%
PERCENT	→ CARDINAL + UNIT + o + QUAL	1	1702	0.00%	99.54%
GOVERNMENT	→ COUNTRY + o	1	217	0.00%	99.54%
BOOK	→ o + NAME	1	12	0.00%	99.55%
ORG:EDU	→ o + NATIONALITY	1	122	0.00%	99.55%
GOVERNMENT	→ CITY + o + CORP JARGON	1	217	0.00%	99.55%
ORG:CORP	→ STATE + o + STATE + CORP JARGON	1	4820	0.00%	99.56%
RATE	→ MONEY + DURATION	1	485	0.00%	99.56%
ORG:CORP	→ o + OCEAN + CORP JARGON + o	1	4820	0.00%	99.57%
PRODUCT:OTHER	→ NAME + LOCATION:OTHER + o	1	78	0.00%	99.57%
NAME	→ FIRST + MIDDLE + NAME	1	804	0.00%	99.57%

rule	children	count	of	% total	cumul've
GRP:ORG	→ NEWSPAPER + CARDINAL	1	102	0.00%	99.58%
TV SHOW	→ DATE	1	26	0.00%	99.58%
ORG:CORP	→ REGION + CORP JARGON	1	4820	0.00%	99.59%
LAW	→ CARDINAL + o	1	75	0.00%	99.59%
LOCATION:OTHER	→ NORP:OTHER + o	1	24	0.00%	99.59%
DATE	→ ORDINAL + DATE	1	4442	0.00%	99.60%
ORG:CORP	→ NAME + o + NAME + o + CORP JARGON + o	1	4820	0.00%	99.60%
DATE	→ NORP:OTHER + o + DURATION	1	4442	0.00%	99.61%
DATE	→ ORDINAL + CARDINAL + DURATION + o + DURATION	1	4442	0.00%	99.61%
ORG:CORP	→ o + REGION + CORP JARGON	1	4820	0.00%	99.61%
DURATION	→ NUMDAY + DURATION	1	1184	0.00%	99.62%
ORG:CORP	→ NAME + CORP JARGON + o + COUNTRY	1	4820	0.00%	99.62%
GOVERNMENT	→ o + STATE	1	217	0.00%	99.63%
DATE	→ YEAR + o + REL	1	4442	0.00%	99.63%
PERIODIC	→ DAY + o	1	56	0.00%	99.63%
ORG:CORP	→ o + NATIONALITY + CORP JARGON	1	4820	0.00%	99.64%
DATE	→ o + DURATION + DATE	1	4442	0.00%	99.64%
MONTH	→ DURATION	1	5	0.00%	99.65%
HOSPITAL	→ ORG:EDU + o	1	7	0.00%	99.65%
NEWSPAPER	→ o + NORP:OTHER + GRP:ORG + o	1	65	0.00%	99.65%
BOOK	→ o + GOVERNMENT	1	12	0.00%	99.66%
ORG:CORP	→ o + CONTINENT + CORP JARGON	1	4820	0.00%	99.66%
ORG:CORP	→ o + NAME + CORP JARGON + o	1	4820	0.00%	99.66%
RATE	→ QUAL + RATE + o	1	485	0.00%	99.67%
PER	→ FIRST + MIDDLE + LAST	1	4378	0.00%	99.67%
MONEY	→ CARDINAL + o + YEAR + o + UNIT	1	3135	0.00%	99.68%
ORG:OTHER	→ o + STATE + o	1	92	0.00%	99.68%
VEHICLE	→ DATE + ORG:CORP + o	1	54	0.00%	99.68%
DATE	→ REL + DAY + DURATION	1	4442	0.00%	99.69%
GRP:LOC	→ ORDINAL + o	1	4	0.00%	99.69%
DURATION	→ STATE + o	1	1184	0.00%	99.70%
DATE	→ MONTH + NUMDAY + DATE	1	4442	0.00%	99.70%
ORG:CORP	→ ORDINAL + GPE + CORP JARGON + o	1	4820	0.00%	99.70%
ATTRACTION	→ CITY + o	1	1	0.00%	99.71%
RATE	→ CARDINAL + UNIT	1	485	0.00%	99.71%
PER	→ FIRST + MIDDLE	1	4378	0.00%	99.72%
PRODUCT:OTHER	→ ORG:EDU + o	1	78	0.00%	99.72%
BOOK	→ NAME + o	1	12	0.00%	99.72%
MONTH	→ MONTH + o + MONTH	1	5	0.00%	99.73%

rule	children	count	of	% total	cumul've
DATE	→ DURATION + DATE	1	4442	0.00%	99.73%
PER	→ NICKNAME + NAME	1	4378	0.00%	99.74%
RATE	→ MONEY + o + MONEY	1	485	0.00%	99.74%
DURATION	→ DURATION + o + YEAR	1	1184	0.00%	99.74%
CITY	→ NAME	1	6	0.00%	99.75%
PER	→ HON + FIRST + HON	1	4378	0.00%	99.75%
AGE	→ QUAL + o + LANGUAGE + o + LANGUAGE	1	124	0.00%	99.76%
DATE	→ o + DAY + o + NUMDAY + REL + DURATION	1	4442	0.00%	99.76%
MONEY	→ NATIONALITY + o	1	3135	0.00%	99.76%
HOSPITAL	→ o + STATE	1	7	0.00%	99.77%
FUND	→ NAME + STATE + o	1	15	0.00%	99.77%
PERCENT	→ UNIT	1	1702	0.00%	99.78%
ORG:CORP	→ HOTEL	1	4820	0.00%	99.78%
ORG:CORP	→ NAME + ORG:CORP	1	4820	0.00%	99.78%
NEWSPAPER	→ CITY + DAY + o	1	65	0.00%	99.79%
PER	→ INI + FIRST + NAME	1	4378	0.00%	99.79%
ORG:CORP	→ NATIONALITY + CORP JARGON	1	4820	0.00%	99.80%
DATE	→ REL + DURATION + o + YEAR	1	4442	0.00%	99.80%
DATE	→ REL + REL + DURATION	1	4442	0.00%	99.80%
DATE	→ DURATION + REL + EVENT + o + DATE	1	4442	0.00%	99.81%
DATE	→ MONEY + o + DURATION	1	4442	0.00%	99.81%
PRODUCT:OTHER	→ REGION + o	1	78	0.00%	99.81%
DATE	→ REL + SEASON + SEASON + DATE	1	4442	0.00%	99.82%
MONEY	→ CARDINAL + o + CARDINAL + UNIT	1	3135	0.00%	99.82%
ORG:CORP	→ BUILDING	1	4820	0.00%	99.83%
DATE	→ CARDINAL + DURATION + DATE	1	4442	0.00%	99.83%
ORG:CORP	→ NAME + o + CITY + o + CORP JARGON	1	4820	0.00%	99.83%
ORG:CORP	→ NEWSPAPER + NAME + CORP JARGON	1	4820	0.00%	99.84%
ORG:CORP	→ NORP:OTHER + CORP JARGON	1	4820	0.00%	99.84%
LOCATION:OTHER	→ NATIONALITY + LOCATION:OTHER	1	24	0.00%	99.85%
MONEY	→ CARDINAL + NUMDAY	1	3135	0.00%	99.85%
NEWSPAPER	→ o + NATIONALITY + o	1	65	0.00%	99.85%
RATE	→ QUANTITY:1D + o + DURATION	1	485	0.00%	99.86%
WOA	→ o + NATIONALITY + o	1	20	0.00%	99.86%
SPORTS EVENT	→ YEAR + CITY + o	1	9	0.00%	99.87%
NEWSPAPER	→ NORP:OTHER	1	65	0.00%	99.87%
CARDINAL	→ REL + CARDINAL	1	1772	0.00%	99.87%
DATE	→ REL + o + DURATION + DATE	1	4442	0.00%	99.88%
DATE	→ DAY + REL + EVENT	1	4442	0.00%	99.88%

rule	children	count	of	% total	cumul've
DATE	→ ORDINAL + DURATION + o + DURATION	1	4442	0.00%	99.89%
BROADCASTER	→ NATIONALITY + o + CORP JARGON	1	56	0.00%	99.89%
PERIODIC	→ PERIODIC + SEASON	1	56	0.00%	99.89%
DATE	→ QUAL + SEASON	1	4442	0.00%	99.90%
ORG:CORP	→ NAME + CITY + CORP JARGON	1	4820	0.00%	99.90%
ORG:CORP	→ o + INI + NAME + o + CORP JARGON	1	4820	0.00%	99.91%
DATE	→ REL + DURATION + o + DURATION	1	4442	0.00%	99.91%
ORG:CORP	→ NAME + o + CARDINAL + CORP JARGON	1	4820	0.00%	99.91%
ORG:CORP	→ o + FIRST + CORP JARGON + o	1	4820	0.00%	99.92%
ORG:CORP	→ NORP:OTHER	1	4820	0.00%	99.92%
GRP:ORG	→ COUNTRY + o + CARDINAL	1	102	0.00%	99.93%
DATE	→ ORDINAL + SEASON	1	4442	0.00%	99.93%
ENERGY	→ QUAL + ENERGY	1	3	0.00%	99.93%
GOVERNMENT	→ FACILITY	1	217	0.00%	99.94%
DATE:OTHER	→ DURATION + REL	1	12	0.00%	99.94%
MONEY	→ MONEY + o + QUAL	1	3135	0.00%	99.94%
NEWSPAPER	→ o + NAME	1	65	0.00%	99.95%
PERCENT	→ CITY + UNIT	1	1702	0.00%	99.95%
MONTH	→ o + CORP JARGON	1	5	0.00%	99.96%
ORG:OTHER	→ o + CITY + o	1	92	0.00%	99.96%
DATE	→ DATE + o + DATE + o + DATE	1	4442	0.00%	99.96%
ORG:CORP	→ ORDINAL + o + CORP JARGON + o + STATE	1	4820	0.00%	99.97%
MONEY	→ UNIT + DAY	1	3135	0.00%	99.97%
ORG:CORP	→ NATIONALITY + OCEAN + CORP JARGON	1	4820	0.00%	99.98%
ORG:CORP	→ CITY + REGION + CORP JARGON	1	4820	0.00%	99.98%
MONEY	→ MONEY + o	1	3135	0.00%	99.98%
PERIODIC	→ DATE + DURATION	1	56	0.00%	99.99%
LAW	→ CARDINAL + COUNTRY + CARDINAL	1	75	0.00%	99.99%
DATE	→ QUAL + DAY	1	4442	0.00%	100.00%
PER	→ HON + PER + o + PER + o + PER	1	4378	0.00%	100.00%