# Possible basic Types:

Entity: e

event: es

propositional: t

# prop (Proper noun, NP without determiner):

e.g. Dumpty ---> n:prop|Dumpty -->[x=Dumpty : e]

# **det, qn (Noun phrases with determiners/quantifiers, NP):**

e.g. the (DET) man (Common Noun (CN)), more juice, the good man etc.

DET(x, CN(x)) → [x=(DET, x, CN(x)) : e]

with adjectives, DET ADJ CN (e.g. the good man)

det|DET(x, and(CN(x), ADJ(x)) *→* [x=(DET, x1, and (CN(x1), ADJ(x1)) : e]

the good fat man:

det|the(x, and(good(x), and(fat(x), man(x))) ---> [x=(the, x1, and(good(x1), and(fat(x1), man(x1)) : e]

pro:poss:det|his($1,n|dog($1)) ---> [x=(his, x1, dog(x1)) : e]

# **adv (adverbial):**

Always predicates over the event term.

Pattern:

adv|ADV(ev) **---->**  [ev : es; p=ADV(ev) : t]

, where (ev) is the overall event variable.

e.g. slowly: slowly(ev) ----> [ev: es; p=slowly(ev) : t]

# **prep (prepositional phrase, PP):**

Prepostional phrases are adverbials and predicate over the event term:

PREP( x (some NP), ev) ---> [ev : es, x : e; p=PREP(x, ev) : t]

e.g. on the table: prep|on (det|the(x, n|table(x)), ev) ---> [ev : es; x=(the, x1, table(x1)): e; p=on(x, ev) : t]

# **verb (verb phrase, VP):**

Intransitive: VERB(NP, ev) ---> [ev : es, x=NP : e; p=VERB(x, ev) : t]

Transitive: VERB(NP1, NP2, ev) -->[ev : es; x1=NP1 : e; x2=NP2 : e; p=VERB(x1, x2, ev) : t]

Apparently the tense is only specified for tenses other than present.... this is done by predicating over the whole verb phrase representation, e.g.

VERB&PAST(NP, ev): in the record type we just say that the event is in the past/present/future, so:

[ev : es, x=NP : e; p1=VERB(x, ev) : t; p2=PAST(ev) : t]

For aspect, e.g. PROG (progressive), we do the same thing, e.g. the predicate for “saying” will be specified as: say-PROG in the corpus. Just add a type t field to the record type saying the event is PROG, so:

VERB-PROG(NP, ev) → [ev : es; x=NP : e; p1=VERB(x, ev) : t; p2=PAST(ev) : t; p3=PROG(ev) : t]

**Aux (auxiliary, e.g. will, can, do etc.)**:

Auxiliaries predicate over the event term.....

auxiliaries that specify tense: will, do, did, is/am/are …. for these just specify the tense as covered under verbs above....

e.g. john will go:

aux|will(verb|go(john, ev), ev)

AUX(VERB(NP, ev), ev)

--->

[ev : es; x=NP : e; p1=VERB(x,ev) : t; p2=AUX(ev) : t]

john will go ----> [ev : es; x=john : e; p1=go(x,ev) : t; p2=will(ev) : t]

# **and (conjunction):**

This is either

a conjunction of two type t predicates: and(P1, P2) ---> [p1=P1 : t; p2=P2 : t]

e.g. john runs fast,

and(verb|run(prop|john, ev), fast(ev)) → [ev : es; x1 = John : e; t1 = run(x1, ev) : t; t2 = fast(ev) : t;]

or a conjunction of noun phrases, e.g. Jack and Jill came. “Jack and Jill” will be coded as:

and(Jack, Jill) of type e in the corpus ...

and so we have:

and(NP1, NP2) ---> [x1=NP1 : e; x2=NP2 : e; x3={x1, x2} : e]

# eq, eqLoc(top level):

These are statements of identity contributed by non-auxiliary 'be' (am/are/is)

for example: “the man is john” will be: eq(ev, the(x1, man(x1)), john)

--->

[ev : es; x1 = (the, x, man(x)) : e; x2=john : e; p=eq(ev, x1, x2) : t]