

THOMSON REUTERS REAL-TIME NEWS: FEED AND ARCHIVE

USER GUIDE

REAL-TIME NEWS FEED AND ARCHIVES

DATA MODEL VERSION 2.14



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ABOUT THIS DOCUMENT

INTENDED READERSHIP

This document is intended for two groups of readers.

- Users of Real-time News content, who are interested in the data model that is present in both Elektron feed and archive data
- Developers writing applications to consume this content, either from an Elektron feed or from archive files

IN THIS GUIDE

This document describes the following:

- Structure of Real-time News data model
- Overview of news coding and Reuters Editorial process
- Overview of Elektron feed consumption
- Structure of MRN FTP site that provides archive files

FEEDBACK

If you have any comments on this document, please contact the Thomson Reuters Machine Readable News team at mrn-product@thomsonreuters.com.

CHAPTER 1 REAL-TIME NEWS

1.1 CONTENT OVERVIEW

Thomson Reuters Real-time News is the only structured textual news service for programmatic use that is powered by Reuters. Reuters is the largest international news agency with more journalists in more countries than anyone else.


Reuters has a long history of market-moving beats and exclusives related to macroeconomics, M&A activity, CEO changes or corporate wrongdoing. Our Real-time News service delivers Reuters News unrivalled company, commodity and economic stories formatted for automated consumption. By delivering Reuters News to your algorithms, you gain a competitive advantage you won't find with any other service.

The live and archived versions of the data share a common data model, with history extending back to 1996 for Reuters News and to 2003 for other news sources.

1.2 DOCUMENTATION AND NOTIFICATIONS

Product documentation is located on the Real-time News My Account page, located [here](#). Other information may be found on the MRN FTP site, as described in Chapter 6.

For support issues, one may contact Thomson Reuters via the My Account site at <https://my.thomsonreuters.com/ContactUsNew?CUType=Incident>. When making your support inquiry, especially when calling, please mention the product – “Real-time News Feed” or “News Archive” – in order to help Thomson Reuters route your issue most efficiently.

Clients are advised to subscribe to service alerts regarding Real-time News feeds and archives. To subscribe, go the Service Alert-Edit Subscriptions page, [here](#). Then check the box at Application -> Financial Information Applications -> Enterprise Information Products -> Thomson Reuters Machine Readable News -> Thomson Reuters Real-time News. Then click the  button at bottom right.

For updates on releases of new versions of Real-time News feeds and archives and for related updates, clients should sign up for Product Client Notifications (PCNs). This will send advance email notifications on relevant releases and updates. To sign up for PCNs on Real-time News, go to the My Subscriptions page, [here](#). Check the box at All Products -> Reuters Enterprise Information -> Thomson Reuters Real-time News. Toward the bottom, make sure that the box for “All Client impacts”, or at least “For Action” under that, is checked. After setting your reminder period, click the **submit** ➔ link in the lower or upper right to confirm your selection.

CHAPTER 2 STORY CONSTRUCTION AND NEWS CODING

2.1 EVOLUTION OF A STORY

A story¹ is a related collection of published news items.

The first part of a story may be an alert. This is a brief item containing the most essential information relating to an emerging story. Sometimes several alerts for the same story are filed in a quick succession.

Alerts may be followed up by a headline and the first textual piece of the story, i.e., story body. This text together with its associated headline is called a “take”. Subsequent takes may also contain additional text as needed.

A story is also attached to a set of category codes. These are transmitted with the alert and headline(s), and are described in the next section.

Each alert or take of the same story contains two time stamps: (1) the story date and time, and (2) the take date and time. The story date and time is the time (in UTC) that the first alert or take for that story was filed and remains the same for all alerts and takes of that story. The take date and time describe when that a particular alert or take was filed.

All parts of a story also contain a common identifier, the Primary News Access Code (PNAC). Because PNACs are reused, it is insufficient to identify a story. One must use the PNAC and story date/time together.

Typically, only news agencies such as Reuters News will ever publish stories over multiple news items. News items from press wires and exchange wires tend to publish a story within a single news item and do not issue alerts.

2.2 NEWS CODING

Machine Readable News (MRN) news items sourced from Thomson Reuters, including Reuters News and third-party non-Internet news sources, carry category codes which describe the content of the story.

The codes described also exist in News Analytics, a separate product containing additional derived metadata such as sentiment. A reference file containing a list of active codes can be found on My Account [here](#).

2.2.1. Product Codes

Product codes identify which desktop news product(s) the news item belongs to. They are typically tailored to specific audiences.

Examples: “M” for Money International News Service and “FB” for the French General News Service

Identification: audiences field, with values prefixed by “NP:”

2.2.2. Topic Codes

Topic codes describe the news item’s subject matter. These can cover asset classes, geographies, events, industries/sectors, and other types.

Examples: “CDV” for credit default swaps, “ENVS” for environmental services sector, and “DIV” for dividends

Identification: subjects field, with values prefixed by “N2:”. Note that in the data, adjacent to the N2 there will be alternative representations of those codes. For example, geographic codes begin with “G:”.

2.2.3. Named Item Codes

Named item codes, also known as recurring report codes, identify news items that follow a pattern. Items sharing the same code cover periodic updates to the same subject matter and often have very similar headlines.

¹ The use of “story” here should not be confused with the Real-time News content, which is broadcast over the MRN_STORY RIC and whose MRN_TYPE FID is set to “STORY”. Real-time News is called “story” because it includes what is commonly referred to as “story body text”.

Examples: “.L” for news on UK stocks and “MEAL/DEL” for CBOT Soymeal Deliveries

Identification: instancesOf field, with values prefixed by “NI:”

2.2.4. Attributions

The attribution denotes the organization that published the news item.

Examples: “RTRS” for Reuters News and “BSW” for Business Wire

Identification: provider field, with values prefixed by “NS:”

2.2.5. RICs

This denotes a RIC, or Reuters Instrument Code, that is tagged to the news item. The most commonly used types of RICs in news typically represent companies, economic indicators, or foreign exchange pairs.

Examples: “IBM.N” for IBM, “EURGBP=” for the Euro/British Pound exchange rate, and “USNAHB=ECI” for the NAHB Housing Market Index

Identification: subjects field, with values prefixed by “R:”

2.2.5.1. Company PermIDs

Thomson Reuters is supplementing its identification of companies with an organizational-level identifier called the “PermID”. Since RICs are quote identifiers, they are less stable over time than a company identifier. Furthermore, the many-to-one relationship between quotes and companies makes it possible also for multiple RICs of a single company to be tagged to a single news item. Thomson Reuters is thus exposing its privately mastered information model and making the PermID publicly available. See <https://permid.org> for more information on the PermID.

Most company RICs in the live Real-time News data will be supplemented with a PermID.

As of this writing, the archives will begin to carry PermIDs, but only for certain sources. It is planned that the PermID will be phased in completely, to all sources, by end of 2017.

Example: 4295904307 for International Business Machines Corporation

Identification: all values are prefixed by “P:”

CHAPTER 3 REUTERS EDITORIAL STORY EVOLUTION: IN DEPTH

This section provides a description and examples of how common stories are created by Reuters Editorial:

- simple story (Section 3.1)
- additional **takes** (Section 3.2)
- subsequent **updates** (Section 3.3)
- resolving errors in stories (Section 3.4)

Note: This section describes the most common processes. However, due to the time-sensitive and manual nature of journalistic work, exceptions to these rules may occur.

Note: Diagrams contain Latin words in order to show the location and format of text.

3.1 SIMPLE STORY

When a newsworthy event occurs, the first part of a story may be an **alert**, a short sentence in upper-case that contains the facts and essential detail. Often several **alerts** are filed in quick succession.

A **newsbreak** is generally created 5-20 minutes after any **alerts**. **Newsbreaks** comprise a **headline** (often different from the **alert**) and perhaps two to four paragraphs of **body** text putting the facts into context and making them meaningful.

An **update** may be filed 20-30 minutes after a **newsbreak**. **Updates** comprise a **headline** (sometimes different from the **headline** in the original **newsbreak**) and 6-20 paragraphs of **body** text with further information about the event.

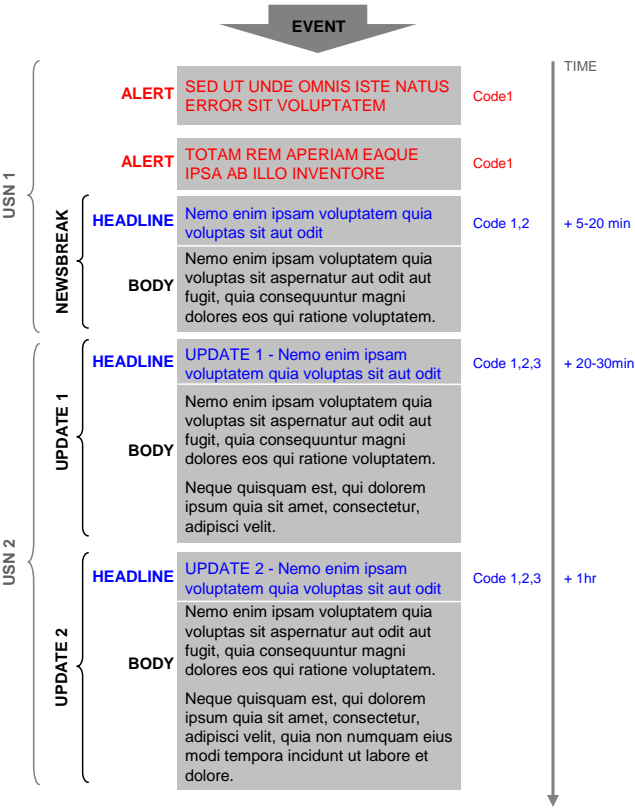
The **update** may be refreshed as the story develops. Each subsequent **update** replaces the previous **update**, but the original **alert(s)** and **newsbreak** remain.

3.2 ADDITIONAL TAKES

The story **body** together with its associated **headline** is called a **take**. Stories are usually filed in a single take. Occasionally, however, further **takes** are necessary to add any of the following:

- additional text
- additional **codes** (e.g., **topic codes**)
- both additional text and **codes**
- a cross-reference table

Note: although the examples in this section refer to “first take” and “second take”, the process applies equally to further **takes** (e.g., “fourth **take**” and “fifth **take**”).



Adding text

In cases where text is being added to the story (but not **codes**), the second **take** is filed with the same **headline** as the first **take**, but with the additional text appended in the **body**.

Adding codes

When a second **take** is used to add **codes** (but not additional text), it is filed with the same **headline** as the first **take**, with the **codes** added.

Note: **Product codes** do not follow this rule and may not be changed once the first **take** is sent out.

Adding text and codes

A second **take** can also be used to add both additional **codes** and text.

The second **take** is filed with the same **headline** as the first **take**, with the **codes** added and with the additional text appended in the **body**.

Note: **Product codes** do not follow this rule and may not be changed once the first **take** is sent out.

Adding a cross-reference table

Cross-reference tables at the end of stories are used by Thomson Reuters desktop product subscribers to click-through to other news and data.

Journalists sometimes replace the automatically generated cross-references with a customised version.

In this case, a second **take** is created with the new cross-reference table in the **body**.

TAKE 1	HEADLINE	Nemo enim ipsam voluptatem quia voluptas sit aut odit
	BODY	Nemo enim ipsam voluptatem quia voluptas sit aspernatur aut odit aut fugit, sed quia consequuntur magni dolores eos qui ratione voluptatem.
TAKE 2	HEADLINE	Nemo enim ipsam voluptatem quia voluptas sit aut odit
	BODY	Reuters Terminal users can see related statistics and news by double clicking on: Korea equities <KR/EQUITY> Gainers/losers <KR/STATS1>...

3.3 NORMAL UPDATES

If stories need to be revised with additional information (e.g., fresh developments, reaction, added context or interpretation) an **update** is issued. The **update** may be refreshed as the story develops. These subsequent **updates** are filed either by replacing the previous **update** or by appending the latest information.

Replacing previous

Most subsequent **updates** replace the previous **update** in the series, and the update number is noted in the **headline tag**, e.g., **UPDATE 1**, **UPDATE 2**.

TAKE 1	HEADLINE	UPDATE1-Nemo enim ipsam voluptatem quia voluptas sit aut odit
	BODY	Nemo enim ipsam voluptatem quia voluptas sit aspernatur aut odit aut fugit, sed quia consequuntur magni dolores eos qui ratione voluptatem.
TAKE 2	HEADLINE	UPDATE2-Nemo enim ipsam voluptatem quia voluptas sit aut odit
	BODY	Neque quisquam est, qui dolorem ipsum quia sit amet, consectetur, adipisci velit, quia non numquam eius modi tempora incidunt ut labore.

Appending latest

Sometimes, the text of the subsequent **update** is added to the previous **update** in the series (similar to the process for an additional **take**), with a "=2", "=3", etc added to the end of the **headline** to indicate the version.

3.4 UPDATES TO ERRORS

At Thomson Reuters we do our utmost to avoid errors but any faults are rectified promptly and clearly. We do not disguise or bury mistakes in subsequent **updates** or stories.

One of three processes is followed, depending on the severity of the error:

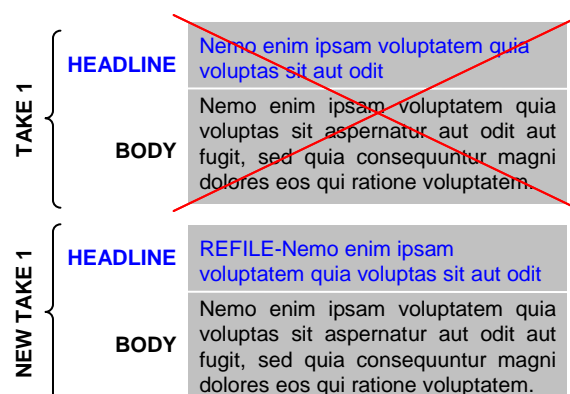
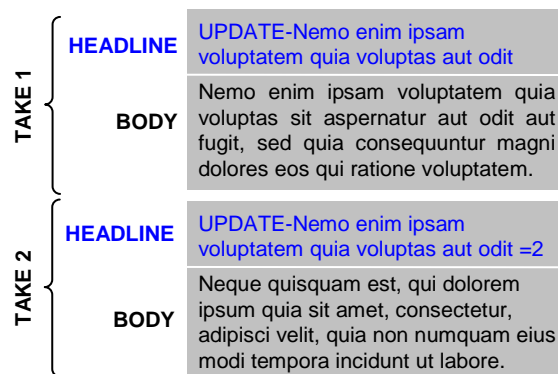
- **Refile** – used to correct minor factual errors in stories which have no bearing on any investment decision or understanding of the news (e.g., common words misspelled)
- **Corrected/Correction** – terms used to distinguish the two types of corrective action used whenever a substantive, factual error appears in a story which alters the meaning or significance of the story or passage (e.g., "million" rather than "billion")
- **Withdrawal** – used for stories that are so fundamentally flawed that correcting is impossible

3.4.1.1. Refiles

If there is a minor error in a story it is **refiled** in one of two ways: replacement or overwrite.

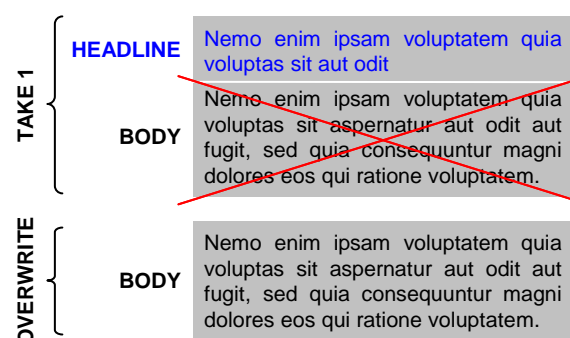
Replacement

In most **refiles**, the **headline** and **body** are both republished, with the **headline tag** **REFILE** (since 2006). Any **alerts** in the story have to be **repeated**.



Overwrite

If there are **alerts** in the story that are correct and there is a compelling reason to retain them on screens while **refiling** the **newsbreak**, the **headline** of the story is left unchanged, but the **body** of the story is overwritten with the amended version.



3.4.1.2. Corrected and Correction

Correcting alerts

If there is a substantial error in an **alert**, it is **corrected**.

When an **alert** is **corrected**, the journalist files it with a new **PNAC**. **CORRECTED-** is inserted at the beginning of the text, and an explanation of what was changed is included in brackets,

Example: **CORRECTED-TRANSMENIAN INDUSTRIES NET PROFIT 5.4 MLN EUROS (NOT 4.5 MLN)**

ALERT	TOTAM REM APERIAM EAQUE IPSA AB ILLO
	CORRECTED-TOTAM REM APERIAM EAQUE IPSA AB ILLO

Variations

- If the explanation would make the **alert** too long, the details are provided at the top of the **newsbreak**
- If there is a series of **alerts** on the same **PNAC** and one or more **alerts** are **corrected**, the other **alerts** (where no correction is required) are **repeated** on the new **PNAC** along with the **corrected alert** (**RPT-** is inserted at the beginning of the text for each of the **repeated alerts**)
- For an **official correction** to an **alert**, **CORRECTED-(OFFICIAL)-** is added to the beginning

Correcting newsbreaks

Correcting is carried out if there is a substantial error in a story – either by a correction or by being **corrected**.

For both, the amended story is usually filed with the same **PNAC**, a **headline tag CORRECTED** and an explanation of what has been changed in the **advisory line**.

Corrected

If both the **body** text and **headline** need to be replaced, a **corrected** message is issued for a story.

The amended story is usually filed with the same **PNAC** but the **story date/time** will be different.

TAKE 1	HEADLINE	Nemo enim ipsam voluptatem quia voluptas sit aut odit
	BODY	Nemo enim ipsam voluptatem quia voluptas sit aspernatur aut odit aut fugit, sed quia consequuntur magni dolores eos qui ratione voluptatem.
CORRECTED	HEADLINE	CORRECTED-Nemo enim ipsam voluptatem quia voluptas sit aut odit
	BODY	Nemo enim ipsam voluptatem quia voluptas sit aspernatur aut odit aut fugit, sed quia consequuntur magni dolores eos qui ratione voluptatem.

Correction

If the **headline** needs to be replaced but new **body** text appended, a **correction** is issued for a story.

The amended story is usually filed with the same **PNAC** and **story date/time**.

TAKE 1	HEADLINE	Nemo enim ipsam voluptatem quia voluptas sit aut odit
	BODY	Nemo enim ipsam voluptatem quia voluptas sit aspernatur aut odit aut fugit, sed quia consequuntur magni dolores eos qui ratione voluptatem.
CORRECTION	HEADLINE	CORRECTED-Nemo enim ipsam voluptatem quia voluptas sit aut odit
	BODY	Nemo enim ipsam voluptatem quia voluptas sit aspernatur aut odit aut fugit, sed quia consequuntur magni dolores eos qui ratione voluptatem. Neque quisquam est, qui dolorem ipsum quia sit amet, consectetur, adipisci velit.

Variations

Alerts and newsbreaks are filed with the same PNAC, so newsbreaks may be affected if an alert is corrected:

- If the newsbreak has not yet been filed, it is filed with the same PNAC as the corrected alert
- If the newsbreak has been filed and is correct, it is resent as a repeat to link with the corrected alert
- If the newsbreak has been filed and is incorrect, the corrected version is sent out with the new PNAC of the corrected alert, with **CORRECTED** as the headline tag
- An official correction to an newsbreak takes a headline tag of **CORRECTED-(OFFICIAL)**

Note: any update after a corrected story carries a new PNAC and therefore does not replace the amended story

3.4.1.3. Withdrawals

If a story is fundamentally flawed, a delete message is sent for the original story which removes it from the screens. The delete message, as well as the original story, is not available from the archive.

CHAPTER 4 MRN MESSAGE ENVELOPE: PRESENTATION AND CONSUMPTION

4.1 OVERVIEW

Real-time News data falls under the Machine Readable News (MRN) model for data presentation and feed consumption.

MRN data is published over Elektron using an Open Message Model (OMM) envelope in News Text Analytics domain RSSL messages.

All MRN messages carry the same FIDs, regardless of the content set. The content-specific information is contained in a FRAGMENT (BUFFER type) FID that has been compressed, and potentially fragmented across multiple messages, in order to reduce bandwidth and RSSL message size. The Real-time News data model is described in Chapter 5.

4.2 NEWS TEXT ANALYTICS DOMAIN PUBLISHING

The News Text Analytics domain (number 33) is designed for publishing large complex nested data structures over Elektron and TREP using a FieldList-based envelope. Each item of data can be fragmented over multiple envelope messages.

4.2.1. Message Fragmentation and Fragment Compression

4.2.1.1. Overview

In order to fit the data into the restricted size of the RSSL update messages allowed over Elektron and through TREP, the data goes through a series of transformations.

1. The core MRN data item is converted into a JSON UTF-8 string
2. This JSON string is then compressed using gzip
3. The compressed JSON is split into a number of fragments which each fit into a single RSSL update
4. The data fragments are added to an update message as the FRAGMENT FID value in a FieldList envelope

4.2.1.2. Fragmentation

Most MRN data items will fit inside a single message, but the message format does allow for a large data item to be split across multiple messages.

Five FIDs, as well as the RIC itself, are necessary to determine whether an entire data item has been received in its various fragments and how to concatenate the fragments to construct a data item:

- MRN_SRC: identifier of the scoring/processing system that published the FRAGMENT
- GUID: globally unique identifier for the data item. All messages for this data item will have equal GUID values.
- FRAGMENT: compressed data item fragment, itself
- TOT_SIZE: total size in bytes of the fragmented data
- FRAG_NUM: sequence number of fragments within a data item. This is set to 1 for the first fragment of each item published and is incremented for each subsequent fragment for the same item.

A single MRN data item publication is uniquely identified by the combination of RIC, MRN_SRC and GUID.

For a given RIC-MRN_SRC-GUID combination, when a data item requires only a single message, then TOT_SIZE will equal the number of bytes in the FRAGMENT and FRAG_NUM will be 1.

When multiple messages are required, then the data item can be deemed as fully received once the sum of the number of bytes of each FRAGMENT equals TOT_SIZE. The consumer will also observe that all FRAG_NUM range

from 1 to the number of fragment, with no intermediate integers skipped. In other words, a data item transmitted over three messages will contain FRAG_NUM values of 1, 2 and 3.

4.2.1.3. Compression of FRAGMENT FID

The FRAGMENT FID is compressed with gzip compression technology, thus requiring the consumer to decompress to reveal the JSON plain-text data in that FID.

When an MRN data item is sent in multiple messages, all the messages must be received and their FRAGMENTs concatenated before being decompressed. In other words, the FRAGMENTs should not be decompressed independently of each other.

The decompressed output is encoded in UTF-8 and formatted as JSON. The data model varies by content type.

4.2.2. Permissioning and Subscription

Data published using the News Text Analytics domain is controlled on a per-feed and per-item basis. Initial refresh responses contain a single PE in their header and PROD_PERM FID which controls access to the feed as a whole. Updates have DACS locks attached that control access on a per-item basis.

4.2.2.1. Service

Elektron Connect users connect with the ELEKTRON_DD or ELEKTRON_EDGE service. Clients using a local TREP (Thomson Reuters Enterprise Platform) might see the service under a different service, according to how their local TREP is configured.

4.2.2.2. Data Domain

As mentioned above, all MRN data is published on the News Text Analytics domain, number 33.

4.2.2.3. Subscription RICs

Each of the MRN content sets is made available over a different RIC, according to the table below.

CONTENT SET	RIC
Real-time News	MRN_STORY
News Analytics: Company and C&E assets	MRN_TRNA
News Analytics: Macroeconomic News & Events	MRN_TRNA_DOC
News Sentiment Indices	MRN_TRSI

4.2.3. Outage Detection

If all the messages on a fragmented MRN data item are not received, then this signifies an outage. A safe rule of thumb is to expect all such fragments to appear within 60 seconds of each other, although in practice they should all appear within one second.

See Section 4.2.1.2 for more information about how to determine whether an entire MRN data item has been received.

4.2.4. Envelope

The fields in each envelope describe one of the following:

- Core MRN data item payload, e.g., headline
- Metadata describing the MRN data item, e.g., total size of the MRN data item
- Metadata describing the fragment, e.g., fragment number

The fields that appear in the envelope vary with the message type. Sixteen fields appear in the initial refresh. In actual MRN messages, ten fields appear in the first fragment of an MRN data item while only four are necessary for a “subsequent” update of that data item. These “subsequent” updates carry the additional fragments of an MRN data item.

The table below demonstrates which fields are present in the three types of messages. A blank value denotes that the field does not appear in that kind of message. In most cases, the table describes what values to expect, when those values are simple to describe. Otherwise, “Present” is written.

NAME	FID	RWF TYPE (SIZE)	DESCRIPTION	INITIAL REFRESH: VALUES	FIRST UPDATE: VALUES	SUBSEQUENT UPDATE: VALUES
PROD_PERM	1	UINT64	Product permissions information for the RIC. Note that full permissioning is stored in Message.permData outside the FieldList.	Range from 10000 to 10003		
ACTIV_DATE	17	DATE	The UTC date when the time in TIMACT_MS was updated. Denotes when the update was published by the MRN_SRC. Stamped upon publication to the Elektron network.	Present, not useful	UTC date, in yyyy-mm-dd format	
RECORDTYPE	259	UINT32	Field which indicates the type of record and also the type of data in that record.	30		
RDN_EXCHD2	1709	ENUM	Identifier for the source from where the data originates	1370, denoting MRN		
TIMACT_MS	4148	UINT64	UTC time of last activity in milliseconds. Relative to ACTIV_DATE, and thus it resets to 0 at the beginning of each UTC day. Denotes when the update was published by the MRN_SRC. Stamped upon publication to the Elektron network.	Present, not useful	Range from 0 (00:00:00.000 UTC) to 86399999 (23:59:59.999 UTC)	
GUID	4271	RMTES_STRING (255)	Globally unique ID for the MRN data item	<empty>	Present	Present
CONTEXT_ID	5357	REAL64	The numeric identifier for a group of instruments with a common field list and market processing rules.	3752 or 3929		

NAME	FID	RWF TYPE (SIZE)	DESCRIPTION	INITIAL REFRESH: VALUES	FIRST UPDATE: VALUES	SUBSEQUENT UPDATE: VALUES
DDS_DSO_ID	6401	UINT32	Elektron (DDS) equivalent of the IDN FID DSO_ID. Has its own set of values.	Present		
SPS_SP_RIC	6480	ASCII_STRING (32)	Populated in each underlying instrument by the provider as a reference to the appropriate SPS sub-provider level RIC	Present		
MRN_V_MAJ	8506	RMTES_STRING (4)	Major version of data model used in FRAGMENT. See also MRN_V_MIN.	<empty>	"2", for data models described in this document	
MRN_TYPE	8593	RMTES_STRING (16)	Type of data contained in FRAGMENT	<empty>	STORY, TRNA, or TRSI	
MRN_V_MIN	11787	RMTES_STRING (10)	Minor version of data model used in FRAGMENT. See also MRN_V_MAJ.	<empty>	"10", for data models described in this document	
MRN_SRC	12215	RMTES_STRING (40)	Identifies the scoring/processing system that published the FRAGMENT	<empty>	Present	Present
FRAG_NUM	32479	UINT64	Number of the current FRAGMENT, within the overall MRN data item	Present, not useful	1	2 or more
TOT_SIZE	32480	UINT64	Total size of the compressed MRN data item in bytes after all fragments are concatenated	0	Present	
FRAGMENT	32641	BUFFER (11000)	Fragment of data	<empty>	Present	Present

4.2.5. Initial Responses and Subsequent Updates

4.2.5.1. Initial Refresh Responses

The initial refresh responses contain all the fields from the envelope. All the fields related to the item and to the fragment are empty or 0. Alternatively, they contain other stale information that should be ignored. The constant and per-feed fields contain meaningful values. The initial refresh responses are cached.

Example refresh for MRN STORY RIC

```

Message.permData: <empty>
Message.data: <FieldList>
PROD_PERM (1): 10001
ACTIV_DATE (17): 21 OCT 2015

```



```

RECORDTYPE (259): 30
RDN_EXCHD2 (1709): 1370
TIMACT_MS (4148): 60413133
GUID (4271): <empty>
CONTEXT_ID (5357): 3752
DDS_DSO_ID (6401): 12424
SPS_SP_RIC (6480): ".[SPSML1L1"
MRN_V_MAJ (8506): "2"
MRN_TYPE (8593): "STORY"
MRN_V_MIN (11787): "10"
MRN_SRC (12215): "dtc_prd_A"
FRAG_NUM (32479): 0
TOT_SIZE (32480): 0
FRAGMENT (32641): <empty>

```

4.2.5.2. Updates

As mentioned above, the updates contain only fields related to the item and the fragment. They do not contain any of the static or per-feed fields. The updates are not cached or conflated.

4.2.5.2.1. First Update

The first update contains all the fields related to the item and the first fragment, subsequent updates only contain the fields relating to the fragment they contain.

Example first update for MRN_STORY RIC

```

Message.permData: <DACS lock for the current piece of data>
Message.data: <FieldList>
ACTIV_DATE (17): 20 AUG 2015
TIMACT_MS (4148): 10157563
GUID (4271): "BSE4njFBT_1509242kv2m5neJzQ52U7adOPFd2fc4P6PMZ/X8yPsDxw"
MRN_V_MAJ (8506): "2"
MRN_TYPE (8593): "STORY"
MRN_V_MIN (11787): "10"
MRN_SRC (12215): "dtc_prd_A"
FRAG_NUM (32479): 1
TOT_SIZE (32480): 4436
FRAGMENT (32641): <fragment of compressed JSON>

```

4.2.5.2.2. Subsequent Update

The subsequent update contains the fields necessary to identify the MRN data item, the order of this fragment among all the fragments for this item, and the fragment itself.

Example subsequent update

```
Message.permData: <DACS lock for the current piece of data>
Message.data: <FieldList>
GUID (4271): "BSE4njFBT_1509242kv2m5neJzQ52U7adOPFd2fc4P6PMZ/X8yPsDxw"
MRN_SRC (12215): "dte_prd_A"
FRAG_NUM (32479): 2
FRAGMENT (32641): <fragment of compressed JSON>
```

4.2.6. Message De-duplication

Duplicate messages may appear on the MRN_STORY feed, especially after a failover in Thomson Reuters infrastructure. Duplicate news items share the same GUID value. Thus, the individual messages share both the GUID and FRAG_NUM values.

4.3 DEVELOPER RESOURCES

The [Thomson Reuters Developer Community portal](#) offers open access to APIs used to consume MRN Elektron feeds. Users may register freely.

The following sections list relevant Developer Portal code, descriptions, and resources.

4.3.1. MRN-specific Sample Code and Tutorials

- Elektron Message API (EMA)
 - C++: [here](#)
 - Java: [here](#)
- Elektron Transport API (ETA). Formerly known as Ultra Performance API (UPA).
 - C: [here](#)
 - Java: [here](#)

For the optimal balance of speed and simplicity, Thomson Reuters recommends the EMA APIs.

If you require an API in another programming language, please contact your Technical Account Manager.

4.3.2. Other Developer Resources

- MRN Developer Webinar, recorded January 2017: [here](#)
- MRN EMA Overview article: [here](#)
- The following tools are available on Github and Developer Portal. Note that they are not officially supported by Thomson Reuters and may be removed in the future:
 - MRN Console: [here](#)
 - MRN GUI Viewer, for viewing various feeds side-by-side: [here](#)

CHAPTER 5 REAL-TIME NEWS DATA MODEL

As mentioned above, the data appears as JSON in UTF-8 after decompression and assembly of the individual messages.

The Real-time News feed contains the headline, story body text, and associated metadata about the story as a simple group of named values.

Envelope Data Type (MRN_TYPE): STORY

FIELD	TYPE	SAMPLE	NOTES
altId	String	"nL3N0D3D3H"	For Thomson Reuters sourced news, this contains the PNAC value. See Section 2.1 for more information.
audiences	String Array	["NP:M", "NP:T"]	News products for this news item. See Section 2.2.1 for more information.
firstCreated	DateTime	2013-04-16T23:00:14.000Z	UTC timestamp for the first version of the story. Millisecond precision. See also Section 2.1 for more information on stories.
headline	String	"PRESS DIGEST - Financial Times - April 17"	<p>The headline text of the news item.</p> <p>Headlines that are naturally longer than 512 bytes are truncated by Thomson Reuters. If truncated, then multi-byte characters are preserved. For example, if the last character uses bytes #512 and #513, then the headline will be truncated after the 511th byte.</p> <p>Some third-party news sources truncate their headlines at fewer than 512 bytes.</p> <p>Truncated headlines have "..." appended, to denote that they were truncated.</p>
id	String	"BSE4njFBT_1509242kv2m5neJzQ52U7adOPFd2fc4P6PMZ/X8yPsDxw"	<u>Uniquely identifies</u> the news item. This is the same value as the GUID in the OMM envelope, described in Section 4.2.4.1.
instancesOf	String Array	["NI:PRESS/FT"]	Named Items for this news item. See Section 2.2.3 for more information.
language	String	"en"	ISO-639 language code. When <i>pubStatus</i> = "stat:canceled", this may be set to "und" denoting "undefined".

FIELD	TYPE	SAMPLE	NOTES
messageType	Int		<p>0: <u>unknown</u></p> <p>1: <u>alert</u>: breaking news with a headline, typically in CAPS, but no story body</p> <p>2: <u>first take</u>: first article of a story</p> <p>3: <u>subsequent take</u>: subsequent article(s) of a story. May include additional metadata.</p> <p>4: <u>correction</u>: update that is issued immediately.</p> <p>5: <u>corrected</u>: type of correction that is made when the story is naturally updated. Less severe than a correction.</p> <p>6: <u>update</u>: a natural update to the story. May include additional context, reaction, analysis, background or facts.</p> <p>7: <u>deletion</u>: indicates to delete the story previously supplied, possibly because it was sent in error</p> <p>8: <u>drop due to expiry</u>: denotes that there will be no further updates on a story, after the source previously communicated that an update was forthcoming</p>
provider	String	"NS:RTRS"	Identifier for the source that provided the news item. See Section 2.2.4 for more information.
pubStatus	String	"stat:usable"	<p>Publication status.</p> <p>"stat:usable" for most content.</p> <p>"stat:canceled" is a request to remove the story from active story caches for viewing. Note that standard MRN usage terms do not allow for viewing.</p> <p>This field is deprecated in favor of the <i>messageType</i> field. <i>pubStatus</i> will be removed in a future release.</p>
subjects	String Array	["N2:COM", "A:4", "N2:PREC", "B:21", "R:VOD.L", "P:4295896661"]	Topic codes and company identifiers that relate to this news item. See Sections 2.2.2 and 2.2.5 for more information.
takeSequence	Int	2	The take sequence number of the news item, starting at 1. For a given story, alerts and articles have separate sequences.
urgency	Int	3	<p>Differentiates story types.</p> <p>1: alert, 3: article</p> <p>This field is deprecated in favor of the <i>messageType</i> field. <i>urgency</i> will be removed in a future release.</p>

FIELD	TYPE	SAMPLE	NOTES
versionCreated	DateTime	2013-04-16T23:00:14.000Z	UTC timestamp for this version of the story. Millisecond precision. See also Section 2.1 for more information on stories.
body	String		The full body text of the news item.
contentType	String	"text/plain"	Mime type of the body. "text/plain" or "text/x-bdc-tms": plain text "text/x-plain-fixed": plain text that displays best in a fixed-width font, often due to the presence of a table. Note that some third parties always tag their content as such, even when there is no table.

5.1 MESSAGE TYPE COMPARED TO PUBLICATION STATUS AND UPDATE TYPE

The *messageType* field incorporates information that is in the *pubStatus* and *urgency* fields. It matches the *DSPLY_NAME* FID on the N2_UBMS RIC.

The below table maps between *messageType*, *pubStatus*, and *urgency*.

messageType	Definition	pubStatus	urgency
0	Unknown	Any	Any
1	Alert	"stat:usable"	1
2	First take	"stat:usable"	3
3	Subsequent take	"stat:usable"	3
4	Correction	"stat:usable"	3
5	Corrected	"stat:usable"	3
6	Update	"stat:usable"	3
7	Deletion	"stat:canceled"	N/A
8	Drop due to expiry	Any	Any

5.2 JSON EXAMPLE OF STORY FEED DATA

```
{
  "altId": "nBSE4njFBT",
  "audiences": [ "NP:BSE" ],
  "body": "Firstsource Solutions Ltd has informed BSE that the members of the Company have passed the
    resolution by way of Postal Ballot, under Clause 35A.\n\n
    \n\nhttp://pdf.reuters.com/pdfnews/pdfnews.asp?i=43059c3bf0e37541&u=urn:newsml:reuters.com:20150924:nBS
    E6yFYfg\n\n \n\n \n\nDouble click on the URL above to view the article.Please note that internet access
    is required. If you experience problem accessing the internet, please consult your network
    administrator or technical support\n\nLatest version of Adobe Acrobat reader is recommended to view PDF
    files. The latest version of the reader can be obtained from
    http://www.adobe.com/products/acrobat/readstep2.html\n\n",
  "firstCreated": "2015-09-24T15:41:50.000Z",
  "headline": "FIRSTSOURCE SOLUTIONS LTD. - Results of Postal Ballot (Clause 35A) <FISO.NS>",
  "id": "BSE4njFBT_1509242kv2m5neJzQ52U7adOPFd2fc4P6PMZ/X8yPsDxw",
  "instancesOf": [],
  "language": "en",
  "messageType": 2,
  "mimeType": "text/plain",
  "provider": "NS:BSE",
  "pubStatus": "stat:usable",
  "subjects": [ "R:FISO.NS", "P:4295873587", "B:195", "B:34", "B:43", "B:49", "BL:52", "G:1", "G:5B", "G:K",
    "M:Z", "N2:BSUP", "N2:INDS", "N2:ISER", "N2:CMSS", "N2:BUS", "N2:EMRG", "N2:IN", "N2:ASIA", "N2:CMPPNY"
  ],
  "takeSequence": 1,
  "urgency": 3,
  "versionCreated": "2015-09-24T15:41:50.000Z"
}
```

CHAPTER 6 MRN FTP SITE: ARCHIVE FILES, ASSET LISTS, MAPPINGS

Thomson Reuters provides Real-time News archive and reference company data over FTP.

Archive files resemble the live feed. They are in JSON format with UTF-8 character encoding. They are compressed as .gz files.

Reference company data is formatted as tab-delimited text files. These include RICs, PermIDs, tickers and other company information. Mappings to common identifiers, including CUSIP, ISIN, and SEDOL, are available upon request. See your Thomson Reuters account manager for more information.

Most of this chapter describes access for production users, which differs from that of trial users. Production users can access the full history, while trial users are restricted to a limited history. Files for the two client types are stored in different directories. See Section 6.4 for more information on the differences.

6.1 ACCESS

Production and most trial users are granted access to the FTP site. Trial users who convert to paid customers should have their credentials upgraded to full-history access. Users should contact their sales specialist or account manager to obtain login credentials.

Clients may use their credentials to connect via plain FTP and also secure FTP (FTPS) via explicit FTP over TLS, using TLS version 1.2.

The FTP site is available at <ftp://mrn-ftp.thomsonreuters.com>, or 54.243.148.106. The site is accessible via FTP client only. Please set your FTP client to passive mode, although in some cases active mode will work instead. FTP/S is available on port 21, and data ports are 60022-60100.

6.2 ARCHIVES

6.2.1. Update Frequency

In line with Thomson Reuters's previous Real-time News Archive offering, the archive files are updated monthly. Users can expect the files to be updated within 1-2 weeks after the close of the month.

With this release, Thomson Reuters has created a *premium* archive offering with daily updates. Users can expect the files to be ready 2-3 hours after the close of the UTC day. See your Thomson Reuters account manager for more information.

Trial users should not expect to see updates during their trial.

6.2.2. Directories

/News/Archives/[Historical/Recent]/[Provider, Reuters subset, or third-party aggregation]/[Year]

Notes:

- Historical/Recent
 - Historical contains all files from the previous calendar years and months, generally. Files are monthly in duration.
 - Recent contains files from the current month. Files are daily in duration.
 - Exception to the previous/current year rule: Recent will continue to hold files from the previous month that just passed, until that month's archives have been reassembled into a monthly file.
- Provider, Reuters subset, or third-party aggregation
 - Individual providers will have a code matching that in the "provider" field (See Chapter 5.). However, it will (a) lack the leading "NS:" prefix and (b) be appended with an underscore². For example, Reuters News archives will be in the directory /News/Archives/RTRS_.

² The underscore was added to differentiate the provider code "PRN", which is a reserved MS-DOS device name in Microsoft and thus disallowed as a file or folder name. It is applied uniformly to all provider-based directories on this level.

- Subsets correspond to various packages of Reuters News. See Appendix 1 for information on how the packages are designed.
 - RTRS_CMPNY_AMER: Americas Company News
 - RTRS_CMPNY_APAC: Asia-Pacific Company News
 - RTRS_CMPNY_EMEA: EMEA Company News
 - RTRS_PGE: Political, General & Economic News
- Corresponding to the “All” and “Top” third-party packages, there are directories that aggregate the current and obsolete sources into a single file. As of this writing, the list of third-party historical sources can be found on Customer Zone / My Account [here](#). On the “Real-time News Sources” sheet, see columns H and G, respectively.
 - 3PTY: all third parties
 - 3PTY_TOP: top third parties

6.2.3. Files

News.[Provider, Reuters subset, or third-party aggregation].[Time Period: yyyyymm|yyyymmdd].[Data Model Version].txt

Notes:

- Provider, Reuters subset, or third-party aggregation
 - Individual providers will have a code matching that in the “provider” field (See Chapter 5.). However, it will (a) lack the leading “NS:” prefix and (b) be appended with an underscore2. For example, Reuters News archives will be in the directory */News/Archives/RTRS_*.
 - Subsets correspond to various packages of Reuters News. See Appendix 1 for information on how the packages are designed.
 - RTRS_CMPNY_AMER: Americas Company News
 - RTRS_CMPNY_APAC: Asia-Pacific Company News
 - RTRS_CMPNY_EMEA: EMEA Company News
 - RTRS_PGE: Political, General & Economic News
 - Corresponding to the “All” and “Top” third-party packages, there are directories that aggregate the current and obsolete sources into a single file. As of this writing, the list of third-party historical sources can be found on Customer Zone / My Account [here](#). On the “Real-time News Sources” sheet, see columns H and G, respectively.
 - 3PTY: all third parties
 - 3PTY_TOP: top third parties
- Time period: UTC
 - yyyyymm: monthly
 - yyyymmdd: daily
- Data Model Version: version of the MRN Data Model. In *AABB* format, where *AA* represents the major version and *BB* the minor version, each with leading zeroes. For example, model 2.12 is represented as “0212”.

6.2.4. Data Model Differences

Most historical archives are on Data Model version 2.10, whereas the current feed data is on version 2.14. Version 2.14 differs in two ways:

- It includes a *messageType* field. See Section 5.1 for more information.
- The *mime* field allows for a “text/x-plain-fixed” value

Users are advised to note these differences when examining News Archive files.

6.2.5. Story Archive Data

The core STORY data is stored in JSON archives.

6.2.5.1. Header

Each file begins with a header containing the following fields:

- RIC: data collected
- Start: UTC timestamp representing the start of the archive. May precede the first item in the archive.
- End: UTC timestamp representing the end of the archive. May follow the last item in the archive.
- Created: UTC timestamp representing file creation start time
- MajorVersion: major version of the MRN data model
- MinorVersion: minor version of the MRN data model

6.2.5.2. Archive Body

The individual collected news items are stored in an `Items` array.

Aside from the core metadata shown in Chapter 5, each item is accompanied by a `timestamps` array, showing up to three regional millisecond-precision³ collection timestamps. Each timestamp has the following fields:

- `source`: can take one of the following values:
 - "AMER": Americas region
 - "APAC": Asia-Pacific region
 - "EMEA": EMEA region
- `name`: type of timestamp. Set to "recorded".
- `timestamp`: UTC timestamp

Next is a `guid` field, showing the same value as the "GUID" field described in 4.2.4.1.

6.2.5.3. JSON Example of Story Archive Data

The following example shows a header and collected news item, based on legacy Data Model version 2.10. See Section 6.2.4 on differences between 2.10 and the current Data Model version, 2.14.

```
{
  "RIC": "MRN_STORY",
  "Start": "2016-12-01T00:00:00.000Z",
  "End": "2016-12-01T23:59:59.999Z",
  "Created": "2018-02-06T11:31:22.846Z",
  "MajorVersion": "2",
  "MinorVersion": "14",
  "Items": [{
    "timestamps": [{
      "source": "AMER",
      "name": "recorded",
      "timestamp": "2016-12-01T12:09:42.170Z"
    }], {
      "source": "APAC",
      "name": "recorded",
      "timestamp": "2016-12-01T12:09:42.114Z"
    }], {
      "source": "EMEA",
      "name": "recorded",
      "timestamp": "2016-12-01T12:09:42.149Z"
    }],
    "guid": "FWN1DW0AB_16120122Vd2Ch2QfMTUx9RsvTSSMUPXPn+Zl/m56bYkN",
    "data": {
      "body": "    Dec 1 (Reuters) - Lee & Man Handbags Holding Ltd <1488.HK>\r\n      * Unit and
        sellers entered into sale and purchase agreement\r\n      * Unit agreed to purchase in
        aggregate 19% equity interest\r\n\r\n      nin target company for rmb41 million\r\n      * Sellers are
        Zhao Shen, Zhao Jingjing, Wang Ling and other\r\n\r\n      nsellers; target company is Beijing Hhg
```

³ Collection clocks are synched via NTP.

```

    Restaurant Management\r\nCo., Ltd\r\n\r\nSource text: (http://bit.ly/2gLPmRG)\r\nFurther
    company coverage: [1488.HK]\r\n\r\n ((Bangalore.newsroom@thomsonreuters.com;)),
    "mimeType": "text/plain",
    "firstCreated": "2016-12-01T11:54:29.000Z",
    "language": "en",
    "altId": "nFWN1DW0AB",
    "headline": "BRIEF-Lee & Man Handbags says unit entered into sale and purchase
    agreement<1488.HK>",
    "takeSequence": 1,
    "pubStatus": "stat:usable",
    "subjects": [ "B:69", "B:75", "B:82", "B:84", "E:1", "E:6", "E:R", "E:W", "G:1", "G:3H", "G:6",
    "G:B1", "G:K", "G:S", "M:NY", "M:Z", "R:1488.HK", "N2:APPA", "N2:ASIA", "N2:ASXPAC",
    "N2:BACT", "N2:BLR", "N2:CMPLY", "N2:CN", "N2:CYCP", "N2:CYCS", "N2:DEAL1", "N2:EASIA",
    "N2:EMRG", "N2:HK", "N2:ISU", "N2:MEVN", "N2:WEAR", "P:4298164107"],
    "audiences": [ "NP:D", "NP:DNP", "NP:E", "NP:M", "NP:PCO", "NP:PSC", "NP:PTD", "NP:RNP", "NP:T",
    "NP:Z" ],
    "versionCreated": "2016-12-01T12:09:41.000Z",
    "provider": "NS:RTRS",
    "instancesOf": [],
    "id": "FWN1DW0AB_16120122Vd2Ch2QfMTUx9RsvTSSMUPXPn+Z1/m56bYkN",
    "urgency": 3
    "messageType": 2
  }
},
...
]
}

```

6.3 COMPANY REFERENCE FILES

Mappings to common identifiers will be provided for companies. These include ticker, MIC, and a Thomson Reuters Identifier Code (RIC).

In addition, third-party identifiers – CUSIP, ISIN, and SEDOL – are available upon request in conjunction with a license from the issuer. CUSIP and ISIN require a license with Standard & Poor's for CUSIPs. ISINs are included because some ISINs are CUSIP-based. SEDOL access requires a license with the London Stock Exchange. Please contact your Account Manager or Sales Specialist if you are interested in viewing these third-party identifiers and have a requisite license. Thomson Reuters will contact the identifier issuer(s) to verify the license(s).

Note that these files are based on the company coverage of Thomson Reuters News Analytics (TRNA). Thus the directory and file names contain "TRNA" instead of "News".

6.3.1. Directories

/TRNA/Companies/EN/[BASIC/CUSIPISIN/SEDOL/CUSIPISINSEDOL]/

Notes:

- The fourth-level directory is permissioned according to user's combination of licenses for third-party identifiers. Access will be given to exactly one such directory. Without the verified third-party licenses, users may be granted access to only the BASIC directory.

6.3.2. Files

TRNA.Companies.EN.[BASIC/CUSIPISIN/SEDOL/CUSIPISINSEDOL].[Asset Store Version, e.g., 038].txt

Notes:

- The Asset Store Version currently corresponds to the last three digits of the systemVersion. It denotes a version of the TRNA coverage list, which typically changes monthly.

- In the future, the TRNA coverage list may be updated more regularly, weekly or daily. In such a case, the string may be of the format “yyyymmdd”, corresponding to a date.

Fields:

- PermID: used to identify the company in the *assetId* field. See Section 2.2.5.1 for more information.
- companyName
- countryOfDomicile: two-character ISO country code
- TRBCEconomicSector: plain-text description of Thomson Reuters Business Classification (TRBC) economic sector
- status: “active” if the company may be scored in a live feed. Otherwise, “inactive”.
- RIC: corresponds to the Editorial RIC, which typically is the one most commonly tagged to news. Note that for Nasdaq RICs ending in “.OQ”, the RIC typically tagged to news ends in “.O”.
- marketMIC: ISO-10383 code for market or exchange identification. Value may differ from similar value maintained by London Stock Exchange.
- CUSIP: only available in files with “CUSIPISIN” in the file name
- ISIN: only available in files with “CUSIPISIN” in the file name
- SEDOL: only available in files with “SEDOL” in the file name

Sort order: by PermID, in ascending order

6.4 TRIAL ACCESS COMPARED TO PRODUCTION ACCESS

As mentioned in the overview to this chapter, trial users can access less data than can production clients, and from a different directory. Thus the files are the same, but the time duration is less.

Following are the key differences in directory structure for trial clients compared to production clients:

- Second-level directory is /Trial, instead of /Archives. In other words, the directory structure starts as /News/Trial
- Third-level directory describes the content and the time period, e.g., 3PTY_2016_Q4. This third level is the lowest level in /News/Trial
- All files are monthly

APPENDIX 1 MACHINE READABLE NEWS: REUTERS NEWS AND SUBSETS

This section describes the product codes used to define each Reuters News subset, both in the feed and historically.

Note that the Global Company package available over the feed represents the union of the Americas, Asia-Pacific, and EMEA packages.

REUTERS NEWS

The All Reuters News package includes access to both Reuters News (RTRS provider code) and Thomson Reuters Automated News feed (TRAUT provider code).

AMERICAS COMPANIES

Product Code	Description
AEN	Latin American Domestic News
BRS	Brazilian Domestic News Service - Portuguese
CAN	Canadian Domestic News Service
E	Securities International News Service
MNI	North American Municipal Domestic News Service
NAT	North American Treasury Domestic News Service
NAW	North American Wealth Management News Service
PCO	Corporate News Pool
RITV	Reuters Insider
RNP	Markets News Pool
U	North American Securities Domestic News Service

ASIA-PACIFIC COMPANIES

Product Code	Description
AUP	AAP & Reuters Financial News
AUF	Australian Domestic Financial News Service
CDS	Chinese Domestic News Service
CLN	Chinese Language News Service
CMN	China Money Domestic News Service
E	Securities International News Service
IF	Indonesian Focus Domestic News Service
KRN	Korean Domestic News Service
PCO	Corporate News Pool
PHD	Philippines Domestic News Service
RNP	Markets News Pool
RSS	Reuters News (Japanese)
SI	South East Asia Economic Domestic News Service
SNI	Indian Domestic News Service

SNS	South Asia Domestic News Service
-----	----------------------------------

EMEA COMPANIES

Product Code	Description
AFN	African Domestic News Service
CZS	Czech Domestic News Service
DA	Danish Domestic News Service
FA	French Equities / Economic News Service
FB	French General News Service
FG	French Money / Debt News Service
GER	German Economic Domestic News Service
GNG	Greek Domestic News Service – Greek
GNN	Greek Domestic News Service – English
MIT	Italian News all subjects – Italian
NW	Norwegian Domestic News Service
OE	Austrian Domestic News Service
P	Portuguese Domestic Service
PCO	Corporate News Pool
PX	Polish Domestic News Service
RNP	Markets News Pool
RX	Russian Domestic News Service
SP	Spanish Domestic News Service (Spanish)
SW	Swedish Domestic News Service
SWF	Swiss Domestic News Service – French
SWI	Swiss Domestic News Service – German
TS	Turkish News - Turkish

POLITICAL/GENERAL/ECONOMIC

The below table refers to product codes in the Reuters News (RTRS) source. In addition, the Thomson Reuters Automated News feed (TRAUT) is also part of this package.

Product Code	Description
D	Debt International News Service
C	Commodities International News Service
ELN	North American Power Domestic News Service
G	General News International News Service
M	Money International News Service
MF	Market Focus International News Service
O	Energy International News Service

S	Sports International News Service
T	Treasury International News Service

APPENDIX 2 THOMSON REUTERS KNOWLEDGE DIRECT

This section lists the news product codes used in standard Thomson Reuters Knowledge Direct (TRKD) news products.

EXTERNAL / NON-PROFESSIONAL

Product packages in this section may be used for external redistribution to the user firm's external customers.

Reuters Subsets

Country

Australia News	Italy News	Singapore News
Brazil News	Japan News	South Africa News
China News	Malaysia News	South Korea News
France News	Mexico News	Spain News
Germany News	Netherlands News	Taiwan News
Greece News	New Zealand News	Thailand News
Hong Kong News	Philippines News	Turkey News
India News	Poland News	UAE News
Ireland News	Russia News	UK News

Other Regions and Topics

Global Financial News English Non-pro	Pan Europe News
Australia NZ Financial News	Nordic & Baltics News
International Equity News	Middle East (MENA) News
FX News	Greater China News
North America	Latin America News
Asia Pacific News	

Third Parties

Business Wire News
PR Newswire News

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Latin America News	Premium Japan News
Australia & New Zealand News	International English News

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APPENDIX 3 HEADLINE TAGS IN COMPANY NEWS: ENGLISH

The table on the following page lists the most common headline tags in English-language (language = “en”, as per Chapter 5) Reuters company news.

ADR Report	GLOBAL MARKETS	NORWAY GAS	Taiwan Stocks
ADVISORY	GRAINS	NSE	TAKE A LOOK
AFRICA INVESTMENT	GRAPHIC	NY Euro Deposits	TAKE-A-LOOK
After the Bell	GUIDE	NY Euro Deposits Close	TECHNICALS
AIRSHOW	GULF STOCKS	NY Exchanges Forwards	TEXT
AMEX CONTINUING HALT	HEADLINE STOCKS	NYMEX	Thai Hot Stocks
AMEX OPENING DELAY	HIGHLIGHTS	NYSE CONTINUING HALT	Thai Stocks
ANALYSIS	Hot Stock Highlights	NYSE HALT	TIMELINE
ANALYST VIEW	India Money Market Rates	NYSE NEW INDICATION	Tokyo Stocks
ANALYSTS' VIEW	Indian Debt	NYSE OPENING DELAY	TOP NEWS
Asia Forex	Indian Government Securities	NYSE RESUMPTION	TOPWRAP
ASIA GRAINS	Indian IPOs	OBITUARY	TRADE IDEA
Asia Markets	INDICATOR	OPINION	TREASURIES
Assets (US)	INDICATORS	OTC HALT	U.S. Cash Product
BEFORE THE BELL	Indonesian Stocks	OTC OPENING DELAY	U.S. Corporate Bonds
Block Trade	INSIGHT	OTC RESUMPTION	U.S. Headline Stocks
Bombay Shares	INSTANT VIEW	OUTLOOK	U.S. Municipals
Bond Markets	INSTANT VIEW 1	Philippine Stocks	U.S. OPTIONS
Brazil Forex Week	INSTANT VIEW 2	POLL	U.S. REFINERY FILING
BREAKINGVIEWS	INSTANT VIEW 3	PRECIOUS	U.S. RESEARCH ROUNDUP
BRIEF	INSTANT VIEW 4	Presale Cattle	U.S. Yield Curve
BUY OR SELL	INSTANT VIEW 5	PRESS DIGEST	UK GAS
BUZZ	INSTANT VIEW 6	PREVIEW	UK Gilts Weekahead
CANADA FX	INSTANT VIEW 7	Q&A	UK Stocks
CANADA RESEARCH ROUNDUP	INTERVIEW	REFILE	UPDATE
CANADA STOCKS	IPO Pricing	RESEARCH ALERT	UPDATE 1
CHRONOLOGY	IPO VIEW	REUTERS EXCLUSIVE	UPDATE 2
COLUMN	IPOVIEW	Reuters Money Graph	UPDATE 3
Commodities	Jakarta Stocks	REUTERS POLL	UPDATE 4
COMMODITIES	Japan Hot Stocks	REUTERS SUMMIT	UPDATE 5
CORRECTED	Lifting the Lid	REUTERS SURVEY	UPDATE 6
CORRECTED-(OFFICIAL)	LIVESTOCK	RLPC	UPDATE 7
DIARY	LOOKAHEAD	RUBBER	UPDATE 9
Dutch Options	LPC	SCENARIO	URGENT
EARNINGS POLL	Malaysia Stocks	SEALED BIDS	US CREDIT
Emerging Debt Emerging Markets FX	MARKET EYE	Singapore Stocks	US CREDIT OUTLOOK
EMERGING EUROPE STOCKS	MARKET EYE WEEKAHEAD	SNAP ANALYSIS	US RESEARCH NEWS
EMERGING MARKETS	MARKET PULSE	SNAPSHOT	US RESEARCH SUMMARY
EURO CORP	MERGER TALK	SOFTS	US STOCKS
Euro Debt	METALS	South Korea Stocks	US STOCKS SNAPSHOT
EURO GOVT	METALS INSIDER	Special Report	VEGOILS
EUROPE MINOR METALS	MIDDLE EAST NEWS HIGHLIGHTS	SPECIAL REPORT	Wall Street Week Ahead
EUROPE RESEARCH ROUNDUP	MIDEAST DEBT	STOCKS NEWS AFRICA	WEEK AHEAD
EXCLUSIVE	MIDEAST MONEY	STOCKS NEWS EUROPE	WITNESS
FACTBOX	MIDEAST STOCKS	STOCKS NEWS INDONESIA	WORLD BONDS
Factors to watch	MMNEWS	STOCKS NEWS MALAYSIA	WORLD NEWS HIGHLIGHTS
FEATURE	MONEY MARKETS	STOCKS NEWS MIDEAST	WRAPUP
FINEWS	MOVES	STOCKS NEWS SINGAPORE	WRAPUP 1
FOREX	NASDAQ HALT	STOCKS NEWS UK SMALL	WRAPUP 2
FUND SCORE	NASDAQ RESUMPTION	STOCKS NEWS US	WRAPUP 3
FUND VIEW	NATGAS PIPELINE CRITICAL NOTICE	STOCKS NEWS VIETNAM	WRAPUP 4
FX Cross	New Issue	STXNEWS LATAM	WRAPUP 5
FX in Europe	NEWSMAKER	SUMMIT	WRAPUP 6
FXNEWS	NORDIC POWER	Swiss stocks	YOUR MONEY
German Data Due	NORDIC STOCKS	TABLE	

APPENDIX 4 HEADLINE TAGS IN COMPANY NEWS: JAPANESE

The following table lists the most common headline tags in Japanese-language (language = “ja”, as per Chapter 5) Reuters company news.

〔焦点〕	UPDATE 1	ロイター短観こうみる	米F R B議長証言こうみる
〔表〕ロイター短観	UPDATE 2	中国インフレ指標こうみる	米F R B議長講演こうみる
10年債入札こうみる	UPDATE 3	中国利上げこうみる	米G D Pこうみる
10月ロイター短観	UPDATE 4	中国指標こうみる	米I S M製造業指数こうみる
11月ロイター短観	UPDATE 5	中国貿易収支こうみる	米債務上限問題こうみる
12月ロイター短観	UPDATE 6	中国貿易統計こうみる	米新規失業保険申請件数こうみる
1月ロイター短観	UPDATE1	中国預金準備率引き上げこうみる	米経済指標こうみる
20年債入札こうみる	UPDATE2	人民元柔軟化こうみる	米雇用統計こうみる
2年債入札こうみる	UPDATE3	債券格付け情報	経常収支こうみる
2月ロイター短観	UPDATE4	債券格付情報	緊急インタビュー
30年債入札こうみる	UPDATE5	円債こうみる	訂正
3月ロイター短観	UPDATE6	再送	訂正（会社側の申し出）
40年債入札こうみる	WRAPUP 1	展望レポートこうみる	訂正（発表者側の申し出）
4月ロイター短観	WRAPUP 2	新規上場企業の横顔	訂正（発表者側の申し出）
5年債入札こうみる	WRAPUP 3	新規公開企業の横顔	豪C P Iこうみる
5月ロイター短観	WRAPUP 4	新設ファンド概要	豪G D Pこうみる
6月ロイター短観	WRAPUP 5	日本国債見通し引き下げこうみる	豪中銀据え置きこうみる
7月ロイター短観	WRAPUP1	日銀人事こうみる	豪中銀金利据え置きこうみる
8月ロイター短観	WRAPUP2	日銀会合こうみる	豪利上げこうみる
9月ロイター短観	WRAPUP3	日銀決定会合こうみる	豪利下げこうみる
BUZZ	WRAPUP4	日銀短観こうみる	豪金利据え置きこうみる
COLUMN	WRAPUP5	日銀総裁会見こうみる	豪雇用統計こうみる
C P Iこうみる	アップル決算こうみる	日銀追加緩和こうみる	貿易収支こうみる
E C Bこうみる	アナリスト情報	株式こうみる	貿易統計こうみる
E C B総裁会見こうみる	インタビュー	機械受注こうみる	起債評価
F O M Cこうみる	お知らせ	為替こうみる	追加
G 2 0こうみる	クレジットこうみる	独G D Pこうみる	追加再送
G 7こうみる	サムスン業績予想こうみる	短観こうみる	追加緩和こうみる
G D Pこうみる	ホットストック	米F O M Cこうみる	鉱工業生産こうみる
J F E	ロイター・テクニカル分析	米F O M C議事録こうみる	銘柄速報
Top News			

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