



TITLE: National Routing Guide Data Feed Specification

STATUS: Issued

ABSTRACT: This document describes in detail the Datafeed for the extraction of National Routing Guide data from the RJIS Data Factory.

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1. DOCUMENT CONTROL

1.1 Document Storage

Drafts (a, b, c, etc.) and the formally issued version of this document will be kept electronically (Word97) and as a hard copy (formal issue only) in the RJIS project library.

The author of the document will keep an electronic version of their own.

1.2 Document History

Revision	Revision Date	Author	Summary of Changes
0001a	17 th Sept 1998	John Pointon	First draft for comment
0001b	5 th October 1998	Kevin Rutherford	Formats enhanced to accommodate error recovery and updates
0001c	17 th November 1998	John Pointon	Updated to reflect comments from User Forum.
0001	17 th December 1998	John Pointon	Updated to reflect final comments from Interested Parties .
0001.1	2 nd February 1999	John Pointon	Updated to reflect final comments from RSP.
0001.2	16 th February 1999	John Pointon	Updated to incorporate new datafeed files and reflect comments from RSP.
0001.3	22 nd March 1999	Andy Burton	Further RSP comments. Further Sema comments.
0001.4	13 th April 1999	Andy Burton	Correction. Locations file detail missing from 1.3
2	6 th May 1999	Andy Burton	Formal Issue
3	13 th September 1999	Carol Oakden	Updated to reflect comments from Interested Parties, and to add the data required for Cross London processing.
4	29 th October 1999	Carol Oakden	Omitted to indicate that data previously specified in this document had been superseded.
5	7 th December 1999	Carol Oakden	Issued for signature.
5a	21 st June 2000	Carol Oakden	Clarifications regarding the format of the NFM64 and text/document files issued in this data feed. Missing comma added to example.
6	14 th July 2000	Carol Oakden	Formal Issue for signature
6a	04 th August 2000	Carol Oakden	Updated to reflect comments from RSP
7	22 nd August	Carol Oakden	Formal Issue for Signature
7a	9 th October, 2000	Carol Oakden	Addition of new easement and zonal data for RJIS Release 2. Addition of zonal route and location data for RJIS Release 2. Reformatting of file layouts for conformance with other data feed specifications (not sidebarred).

8	11 th January 2001	Carol Oakden	Formal Issue for Signature
9			Used for a formal re-issue of issue 7 - the RJIS Phase 1 specification
10	22 nd March 2001	Dave Pearson	Re-issue for signature 1.4 References to documents that are not open standards removed
10a	13 th September 2005	Carol Oakden	Removal of NFM64 Ticket translations following changes to fare checking rules. Changes to NFM64 fares data to include only relevant ticket types required for fare checking. Updated typical file sizes to reflect current data set.
11	20 th September 2005	Carol Oakden	Formal issue

1.3 Changes Forecast

No changes forecast

1.4 Referenced Documents

None

1.5 Abbreviations

ATOC Association of Train Operating Companies
RSP Rail Settlement Plan Ltd.
RJIS Rail Journey Information Service

2. SCOPE

Data feeds will allow all or selected parts of the static data held within the Data Factory to be made available to a file based system. It is intended that the Datafeeds will run nightly therefore static data is defined as data not required to be extracted more frequently than 24hrs.

Dynamic extracts from RJIS are covered by API (Application Program Interface) specifications.

The data feed services will be available at each phase of the RJIS Development but will be limited to the data available in the data factory at each stage.

The RJIS System will be responsible for the delivering of the relevant files to an approved destination that meets the Fujitsu minimum specification, see section 5.

3. APPROACH

This document describes in detail the Datafeed for Routeing Guide Data extracted from the RJIS Data Factory.

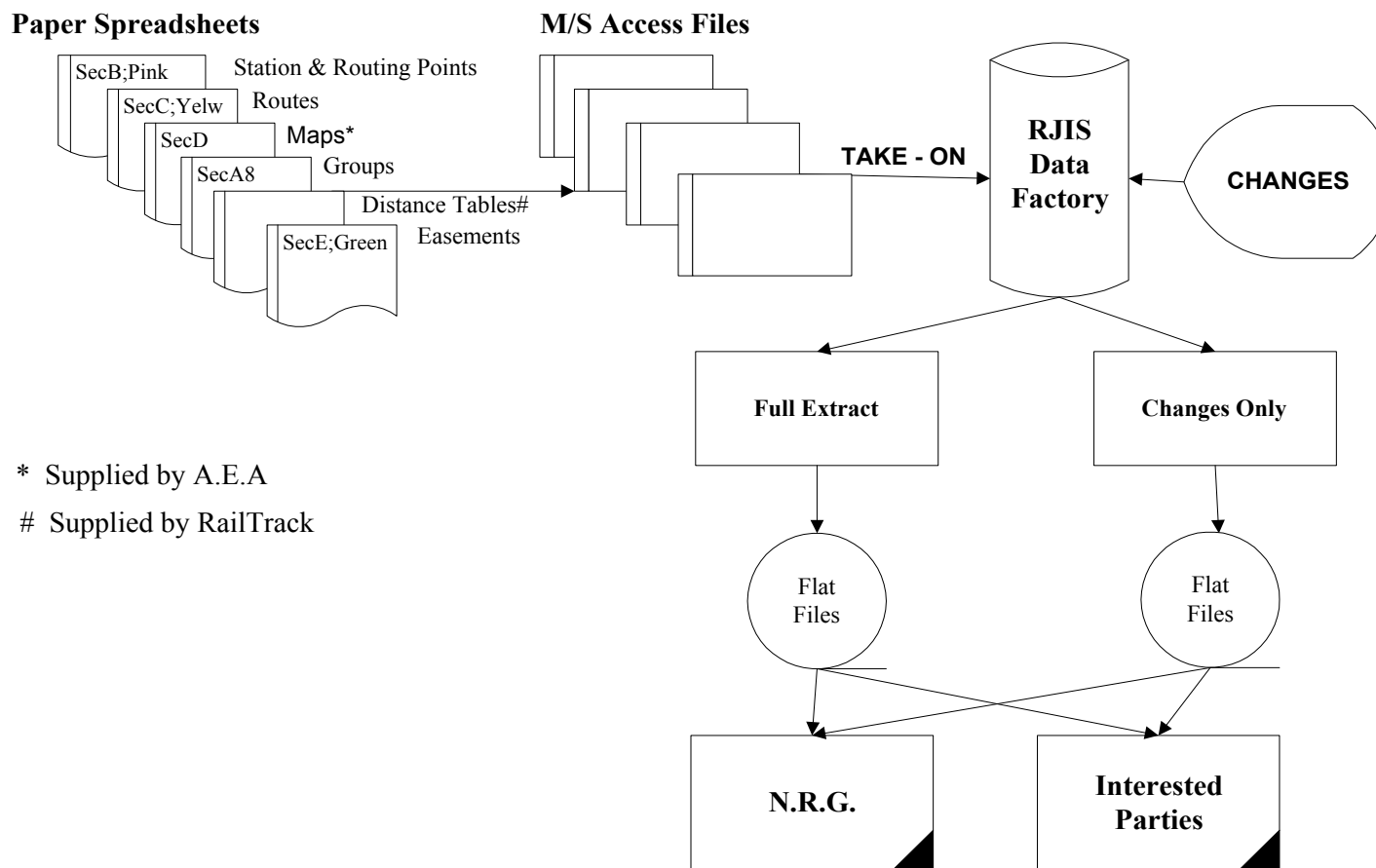
It is based on the generic specification which defines the basic rules and procedures that will apply to the datafeeds.

Other documents for this phase are:

RJIS Datafeeds Interface Specification for Timetable Information – sp0036.doc

RJIS Datafeeds Interface Specification for Fares and Associated Data – sp0035.doc

The following diagram shows how the original data will be captured into the RJIS Data Factory and the subsequent extraction of the information to the Interested Parties.



* Supplied by A.E.A

Supplied by RailTrack

4. STRUCTURE

Datafeeds will be delivered in fixed format flat text files containing a number of records. These will have been extracted from various database tables as defined in the Detailed Design phase. There will be multiple files and multiple record types.

The following export file types are defined for the NRG export:

File type	Contents	Typical Size	Generic filename
Station file	Lists all stations in the NRG	80 Kb	RJRGnnnn.RGS
Station-Group file	Lists all station groups and the preferred station of each	3 Kb	RJRGnnnn.RGG
Routeing point file	Lists all routeing points	4 Kb	RJRGnnnn.RGP
Node file	Lists all nodes (routeing points & interchanges)	4 Kb	RJRGnnnn.RGN
Map file	Lists all maps in section D of the NRG (plus the LO map)	5 Kb	RJRGnnnn.RGM
Link file	Lists all links (between nodes) appearing on any map	180 Kb	RJRGnnnn.RGL
Permitted routes file	Lists all routes (between routeing points) permitted by section C of the NRG	3 Mb	RJRGnnnn.RGR
Station-Link file	Lists physical distance between every pair of adjacent stations	80 Kb	RJRGnnnn.RGD
Easement Text	Text information regarding an Easement	25 kb	RJRGnnnn.RGE
Easement Definition	Details of the type of easement and the affected TOCs, locations, etc	60 kb	RJRGnnnn.RGF
Easement TOC	TOC that publishes the easement	3 kb	RJRGnnnn.RGH
Routes	Route Details and Route Data	15 kb	RJRGnnnn.RGK
London Stations	Details of stations which are included in Cross London processing	< 1k	RJRGnnnn.RGC
New Stations	New Stations file	1 kb	RJRGnnnn.RGX
Locations	Locations cross ref. File (CRS/NLC codes)	250 kb	RJRGnnnn.RGY
Zonal routes	Lists zonal routes and the zones covered by those routes	<1 Kb	RJRGnnnn.RGV
Zonal fare locations	Lists zonal fare locations and the zones covered by those locations	<1 Kb	RJRGnnnn.RGB
Zonal system locations	Lists locations which are included in a zonal system, and the zones in which the location exists.	3.5 Kb	RJRGnnnn.RGA
Download Index	List of files in the download	< 1k	RJRGnnnn.RGI

(where *nnnn* is a sequence number defined by the file's exporter).

Each file will contain *all* appropriate records from the RJIS NRG database. The files for the National Routeing Guide datafeed are available as full files only, and not as changes only updates, as they are small files and are expected to change infrequently.



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The format of the files for the National Routeing Guide datafeed is defined in the next section. These have taken into account all the necessary standards.

5. KEY TECHNICAL DETAILS

Output from the NRG datafeed will comprise a number of separate text files containing data records. Each file will comprise an informational header, followed by an ordered sequence of records, followed by a terminator.

All records will be produced in ASCII and DOS format. (see section 5.2.2 for receiving files on UNIX platforms).

Every line of every file will be either a comment (introduced by a leading '/' character) or a record. Each record will comprise of a sequence of fields separated by commas or in fixed character positions. For comma separated files where there is no data present in a field then the commas will be adjacent (ie. not space filled).

Every file will commence with the following sequence of comments:

```
#!/ Start of file
#!/ Content type:  type
#!/ Sequence:     nnnn      (incl. preceding zeroes)
#!/ Generated:    dd/mm/yyyy
#!/ Exporter:     RJIS_module version
```

where *type* is one of:

- stations
- station-groups
- routeing points
- nodes
- maps
- links
- permitted routes
- station-links
- easement text
- easement definition
- easement TOC
- routes
- London station list
- new stations
- locations
- index
- zonal routes
- zonal system locations
- zonal fare locations

The sequence number listed in the header will match that in the filename (see above); the number of records reported will not include comment lines.



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The records in each export file will be sorted in increasing order (according to the standard ASCII collating sequence) on all fields, in the order in which they appear in records.

Every file will terminate with a comment line of the form:

```
/!! End of file (nnnnnn records) (dd/mm/yyyy)
```

thus providing some protection against inadvertent file truncation.

6. FILE TYPES

The following record layouts define the full file layouts. Note that file layouts may change in later versions of this document. In each of the output files the fields are comma separated, with empty fields having zero length. The LENGTH column in the tables shows the maximum length of the fields.

6.1 File :- STATION file

Description :-

All stations relevant to the National Routeing Guide are included in this file.

Stations that are routeing points, or members of station groups which are routeing points, will have no related routeing points. Other stations will have between 1 and 4 related routeing points as given in section B of the NRG.

Station-group identifier data is required for those stations in the station-groups defined in section A of the NRG.

Key	Field Name	Length	Description
Y	STATION_IDENTIFIER	3	Station Identifier (CRS code)
	ROUTEING_POINT_1	3	First related routeing point, either a station CRS code or a Routeing Guide Group code. No value will be specified in this field if the station is a routeing point.
	ROUTEING_POINT_2	3	Second related routeing point, if applicable, either a station CRS code or a Routeing Guide Group code.
	ROUTEING_POINT_3	3	Third related routeing point, if applicable, either a station CRS code or a Routeing Guide Group code.
	ROUTEING_POINT_4	3	Fourth related routeing point, if applicable, either a station CRS code or a Routeing Guide Group code.
	STATION_GROUP_ID	3	Identifies the Routeing Guide group in which the station resides, if applicable.

Example Records for Abbey Wood, Aberdeen (a routeing point), Aston (part of Birmingham group) and Stevenage (has 3 routeing points and is in Stevenage group).

ABW,DFD,G17,G01,,

ABD,,,,,

AST,,,,,G02

SVG,CBG,FPK,PBO,,G28

6.2 File :- STATION GROUP file

Description :-

This file does not include the list of stations which comprise the station group, as this data is present in the station records themselves.

Key	Field Name	Length	Description
Y	STATION_GROUP_ID	3	3 character code, with format Gnn, where nn is 2 numeric characters
	MAIN_STATION	3	The CRS code of the main station in the routeing point group.

Example station-group records:

G02,BHM / Birmingham Group

G09,DBY / Derby Group

6.3 File :- ROUTEING POINTS file

Description :-

This file contains a list of the routeing points and does not associate any other data with them.

Key	Field Name	Length	Description
Y	ROUTEING_POINT	3	This field contains either a CRS code, or a Station Group identifier.

Example routeing point records, for Aberdeen and Birmingham Group:

ABD

G02

6.4 File :- NODE file

Description :-

This file consists of a list of nodes (ie the routeing points and interchanges) and does not associate any other data with them.

Key	Field Name	Length	Description
Y	NODE	3	This field contains either a CRS code, or a Station Group identifier.

Example node records, for Loughborough and Stevenage Group:

LBO

G28

6.5 File :- MAP file

Description :-

This file consists of a list of map codes, and does not associate any other data with them. An entry exists in this file for the map LO, which is used when validating journeys via Thameslink.

Key	Field Name	Length	Description
Y	MAP_IDENTIFIER	2	A Routeing Guide map code, as defined in Section D of the NRG.

Example map records:

AS

BD

6.6 File :- LINK file

Description :-

The records in this file apply to routing points and interchange points and define the links between the nodes which are represented on the maps in section D of the NRG.

Each link is directional, therefore each link record has a corresponding record with the start and end nodes reversed, which will also be explicitly included in the link file.

If a link appears on more than one map then a separate link record is required for each map which contains the link.

Key	Field Name	Length	Description
Y	START_NODE	3	Either a CRS code or Station Group identifier which identifies a routeing point or interchange point.
Y	END_NODE	3	Either a CRS code or Station Group identifier which identifies a routeing point or interchange point.
Y	MAP_CODE	2	A map code, as identified in the MAP file.

Example link data, for Norwich to Peterborough, and Nuneaton to Birmingham:

G02,NUN,CN

G02,NUN,CS

NRW,PBO,CN

NUN,G02,CN

NUN,G02,CS

PBO,NRW,CN

6.7 File :- PERMITTED ROUTES file

Description :-

These records define the permitted routes between all pairs of routeing points which are defined in section C of the NRG.

The map sequence consists of an ordered list of map identifiers. The maps will appear in the correct geographical sequence so that the sequence defines a continuous route from the start routeing point on the first map to the end routeing point on the last map.

Permitted routes shown in the NRG as “LONDON” are represented by a map sequence consisting of the single map “LO”.

Each permitted route is directional so each permitted route has a corresponding record with the start and end routeing points and the map sequence reversed.

Key	Field Name	Length	Description
Y	START_ROUTEING_POINT	3	Either a CRS code or Station Group identifier which identifies a routeing point or interchange point.
Y	END_ROUTEING_POINT	3	Either a CRS code or Station Group identifier which identifies a routeing point or interchange point.
Y	MAP_CODE	2*n	One or more map codes which define a map sequence between the start and end routeing points. Where more than one map code exists, they are comma separated.

Example permitted routes data:

/ Bedford to Aberdeen

BDM,ABD,LO

BDM,ABD,MM,LM

BDM,ABD,MM,ER

BDM,ABD,LM

BDM,ABD,MM,PS,LM

BDM,ADB,MM,CN,LM

/ Ashford International to Bristol Group

ASI,G05,LO

ASI,G05,CS,WR

ASI,G05,CS,WE,CE

ASI,G05,CW,BD

6.8 File :- STATION LINKS file

Description :-

These records define the distances between the stations, as derived from the ORCATS data and as represented on the Great Britain Passenger Railway Timetable map.

The distance format is of the form NN.NN where leading and/or trailing zeroes are not mandatory but the decimal place is.

Each station-link record is directional so each station-link record has a corresponding record with the start and end stations reversed.

For information, the RJIS system allows a “margin of error” which is used by the routing guide software as necessary. It is assumed that external systems will apply their own margin of error.

Key	Field Name	Length	Description
Y	START_STATION	3	CRS code of station.
Y	END_STATION	3	CRS code of station
	DISTANCE	5	Mileage between start station and end station to the nearest hundredth of a mile.

Example station-link data for Kidsgrove to Alsager and Kidsgrove to Congleton:

KDG,ASG,2.34

KDG,CNG,5.63

6.9 File :- EASEMENT TEXT file

Description :-

This file contains all the easement descriptions. It is linked with the Easement Details File, which contains all other data required for the application of the easement to a journey.

Key	Field Name	Length	Description
Y	TEXT_REF	6	A reference number which uniquely identifies the easement.
	EASEMENT_TEXT	2000	This is free format text with a maximum length of 2,000 characters. Any commas embedded in this text are part of the text; they are not to be considered record separators.

Example Easement data:

/ An example easement.

000001, Customers Travelling from the Great Yarmouth to Norwich line (via ACLE) to the Lowestoft line may change at Norwich

6.10 File :- EASEMENT DEFINITION file

Description :-

This file contains details of the easements described in the Easement Text file. There are several record types in this file, each of which is identified by the RECORD_TYPE field.

Easement Records:

Key	Field Name	Length	Description
Y	RECORD_TYPE	1	Value = E (Easement)
Y	EASEMENT_REF	6	A unique identifier for this easement.
	START_DATE	8	The date from which this easement applies in the format ddmmyyyy.
	END_DATE	8	The date to which this easement applies in the format ddmmyyyy. A high date value 31122999 indicates that the easement applies until further notice.
	TEXT_REF	6	This identifies the textual description of this easement. Several easements may refer to the same textual description.
	EASEMENT_TYPE	1	Indicates the type of easement. Values are as follows: 1 Sleeper 2 Disabled Passenger 3 Normal 4 Service Variation
	EASEMENT_CLASS	1	Indicates whether the easement is a positive easement, or a negative easement. Values are as follows: 1 Positive 2 Negative
	CATEGORY	1	Indicates the category of the easement. Values are as follows: 1 Local easement 2 Map easement 3 Routeing point easement 4 Doubleback easement 5 Fare route easement 6 Manual easement 7 Circuitous Route easement



	VALID_DAYS	7	A flag for each day to indicate whether the easement applies on that day. The first flag represents Monday. Each flag has a value Y or N.
	START_TIME	4	The time of day from which the easement applies, in the format hhmm. There will be no value in this field if the easement applies at all times. Both START_TIME and END_TIME will be specified if relevant.
	END_TIME	4	The time of day to which the easement applies, in the format hhmm. There will be no value in this field if the easement applies at all times.

Example Easement Record:

E,000509,01012000,31122999,000001,3,1,1,YYYYYYY,,

Easement Location Records:

Key	Field Name	Length	Description
Y	RECORD_TYPE	1	Value = L (Easement Location)
Y	EASEMENT_REF	6	A unique identifier for this easement.
Y	LOCATION_CODE	3	CRS code identifying a location associated with the easement.
	LOCATION_MODIFIER	1	Indicates the type of location, as follows: 1 – Applicable location. The easement applies to journeys containing this location. 2 – Origin. The easement applies to journeys from this origin. 3 – Destination. The easement applies to journeys to this destination. 4 – Via. The easement applies to journeys via this location. 5 – Exclude. The easement applies to journeys which exclude this location.

Example Easement Record:

L,000509,NRW,1
 L,000509,BUC,3
 L,000509,CNY,3
 L,000509,LGD,2

L,000509,GYM,2

Easement Details Records:

Key	Field Name	Length	Description
Y	RECORD_TYPE	1	Value = D (Easement Details)
Y	EASEMENT_REF	6	A unique identifier for this easement.
Y	DETAIL_TYPE	1	Indicates the type of detail for this easement, as follows. The type of code in the DETAIL_CODE field depends on the setting of this field. 1 – The easement applies when trains with this UID code are included in the journey. 2 – The easement applies to journeys using this TOC 3 – The easement applies to tickets with this route. 4 – The easement applies to tickets with this ticket code.
Y	DETAIL_CODE	8	The value in this field depends on the value of the previous field. It may include a TOC code, Route code, Ticket code or Train UID.

Example Easement Detail Records:

D,000509,2,VT

D,000509,4,FOR

D,000509,4,FOS

Easement Exception Records:

Key	Field Name	Length	Description
Y	RECORD_TYPE	1	Value = X (Easement Exception)
Y	EASEMENT_REF	6	A unique identifier for this easement.
Y	EXCEPTION_TYPE	1	Indicates the type of exception for this easement, as follows. The type of code in the DETAIL_CODE field depends on the setting of this field. 1 – The easement does not apply when trains with this UID code are included in the journey. 2 – The easement does not apply to



			journeys using this TOC
Y	EXCEPTION_CODE	8	The value in this field depends on the value of the previous field. It may include a TOC code or Train UID.

Example Easement Detail Records:

X,000509,2,SR

6.11 File :- EASEMENT TOC file

This file contains all the easement texts with details of the TOC publishing the easement text.

Key	Field Name	Length	Description
Y	TEXT_REF	6	A unique identifier for this easement.
Y	TOC	2	The TOC code of the TOC which has raised the easement. May be set to spaces if this information has not been recorded.

Example record:

000027,WW

6.12 File :- ROUTES file

Description :-

This file contains two record types.

The first indicates whether a particular route refers to London (either excludes or includes London). This information is required for cross-London processing to be handled correctly. There will always be a London Route record for routes which have route data records. There are no London Route records for those routes which do not have any Route Data (eg ANY PERMITTED).

The second record type contains details of the TOCs, modes of transport and locations included in the route descriptor. There is no Route Data record for those routes which do not include particular locations, TOCs or transport modes, eg DIRECT.

London Route Records:

Key	Field Name	Length	Description
Y	ROUTE_CODE	5	A 5 digit route code which uniquely identifies this route.
Y	RECORD_TYPE	1	Value = L (London Route)
	LONDON_MARKER	1	Indicates whether London is included in or excluded from the route. Values are: 0 – the route excludes London 1 – the route MUST include London 2 – the route MAY include London (ie the route descriptor contains two locations, eg STRATFORD/LONDON, indicating that the journey must pass through Stratford OR London to be valid) 3 – the route does not mention London (eg ROMFORD).

Example Route London Records:

Example London Route record:

/ Route 00202 (WATFORD NOT LOND)

/ Route excludes London

00202,L,0

Route Data Records:

Key	Field Name	Length	Description
Y	ROUTE_CODE	5	A 5 digit route code which uniquely identifies this route.
Y	RECORD_TYPE	1	Value = D (Route Data)
Y	ENTRY_TYPE	1	One of the following values: A – used with CRS code to indicate that the route description contains a list of locations



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			<p>ALL of which must be included in the journey for any fare with this route code to be valid</p> <p>I – used with CRS code to indicate that the route description contains a list of locations ANY of which must be included in the journey for any fare with this route code to be valid</p> <p>E – used with CRS code to indicate that the route description contains a list of locations ALL of which must not be included in the journey for any fare with this route to be valid</p> <p>T – used with TOCID to indicate that the route description contains a list of TOC codes, which indicate which TOCs’ trains must be used on the journey for any fare with this route to be valid</p> <p>X – used with TOCID to indicate that the route description contains a list of TOC codes, which indicate which TOCs’ trains must NOT be used on the journey for any fare with this route to be valid</p> <p>L – Used with Mode Code to indicate that the route description contains a transport mode which must be used by one of the legs on the journey</p> <p>N – Used with Mode Code to indicate that the route description contains a transport mode which must NOT be used by any of the legs of the journey.</p>
Y	CRS_CODE	3	A value will be specified for entry types A, I and E.
Y	GROUP_MKR	1	Y or N to indicate whether the CRS code represents an individual location (Value=N), or one station in a routeing guide group (Value= Y). If Y, then the whole of the group is included in the route (ie the route must include one of the locations in the group (for A or I type entries) or must exclude all the locations in the group (for E type entries)).
	MODE_CODE	3	<p>One of the valid mode codes,ie</p> <p>000 – train</p> <p>001 – walk</p> <p>002 – bus</p> <p>003 – ferry</p> <p>004 – London Underground</p> <p>005 – transfer</p> <p>007 – metro</p> <p>The ModeCode must be specified where</p>



			entry type is L or N.
	TOC_ID		A value will be specified for entry types T and X.

Example Route Data

/ Route 00461 (AP BHAM RUGBY)

/ Route includes Birmingham and Rugby. Birmingham is a routeing guide group.

00461,D,A,BHM,Y,,

00461,D,A,RUG,N,,

6.13 File :- LONDON STATIONS file

Description :-

This file contains a list of the London stations required for Cross London processing. Each station has markers to indicate whether it is a London terminal, and whether cross-London transfer is permissible from or to this station.

London Station Records:

Key	Field Name	Length	Description
Y	CRS_CODE	3	Station CRS code
	LT_MARKER	1	Y or N to indicate whether the station is a London Terminal
	XLONDON_MARKER	1	Y or N to indicate whether cross-London transfer is permissible from or to this station.

Example London Station record:

/ London Blackfriars is a London terminal and also a location from/to which cross London
/ transfer is permitted.

BFR,Y,Y



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6.14 File :- NEW STATIONS file

Description :-

This file is used to hold new stations that has been created since NFM64 and shows the NFM station code that should be used for when obtaining fares for Routeing Guide Fare checking.

New Station Records:

Key	Field Name	Length	Description
Y	NFM64_STATION_CODE	3	The CRS code of the station for which fares exist in NFM64.
Y	NEW_STATION_CODE	3	The CRS code of the station for which fares did not exist in NFM64.
	START_DATE	8	The date from which this translation is effective, in the form ddmmyyyy.
	END_DATE	8	The date until which this translation is effective, in the form ddmmyyyy. If this field is set to a high date, 31122999, then this indicates that the record is effective until further notice.

Example New Stations data:

/ new station code LTN is equivalent to LUT (when checking fares) from 31st Dec 99 until further notice.

LUT,LTN,31121999,31122999

6.15 File :- LOCATIONS file

Description :-

This file is used to hold cross reference details between CRS and NLC codes.

New Station Records:

Key	Field Name	Length	Description
Y	UIC_CODE	3	Admin Area Code for the location
Y	NLC_CODE	4	NLC code for location. Fares in NFM64 are specified using the NLC code of the fare origin and destination.
	GROUP_CODE	4	Fares group code, which may be the same as the NLC code.
	CRS_CODE	3	The CRS code of the location.
	COUNTY_CODE	2	County code of the location.
	ZONE_CODE	4	Zone code of the location.
	START_DATE	8	The date from which this record is effective, in the form ddmmyyyy.
	END_DATE	8	The date until which this record is effective, in the form ddmmyyyy. If this field is set to a high date, 31122999, then this indicates that the record is effective until further notice.

Example Locations data:

/ Melton Mowbray is not in a fares group and has no zone code.

70,1851,1851,MMO,20,,01011999,31122999

6.16 File :- ZONAL ROUTES file

Description :-

This file contains details of fare routes within a zonal system. Several records may exist for the same route code, in order to specify all the zones included in the route.

Key	Field Name	Length	Description
Y	ROUTE_CODE	5	A 5 digit route code which uniquely identifies this route.
Y	ZONAL_SYSTEM	2	A 2 character zonal system identifier, for example GL = Greater London
Y	ZONE_NUMBER	1	A zone included in the route. Values in this field depend on the number of zones within the zonal system.

Example Zonal Routes Records: (Route is ZONE U12*LONDON)

00932,GL,1

00932,GL,2

6.17 File :- ZONAL FARE LOCATIONS file

Description :-

This file contains details of a fare location which applies to a zonal system, its zonal system identifier, and the zone numbers which are included in the zonal fare location. Several records can occur for one zonal fare location. Only fare locations that apply to UK zonal systems are included in this file.

Key	Field Name	Length	Description
Y	NLC_CODE	4	The NLC code of the fare location.
Y	ZONAL_SYSTEM	2	A 2 character zonal system identifier, for example GL = Greater London
Y	ZONE_NUMBER	1	A zone included in zonal fare location.

Example Zonal Fare location records: (Zonal fare location is ZONE R3456 ZONES)

0040,GL,3

0040,GL,4

0040,GL,5

0040,GL,6

6.18 File :- ZONAL SYSTEM LOCATIONS file

Description :-

This file contains details of a station which occurs in a zonal system, its zonal system identifier, and the zone number of the station within the zonal system. Several records can occur for one station, if it is a boundary station, ie in several zones within a zonal system.

Key	Field Name	Length	Description
Y	LOCATION_CODE	4	NLC code identifying a station in a zonal system
Y	ZONAL_SYSTEM	2	A 2 character zonal system identifier, for example GL = Greater London
Y	ZONE_NUMBER	1	The zone in which the location resides.

Example Zonal Locations Records: (Herne Hill is in zones 2 and 3 in the London zonal system)

5066,GL,2

5066,GL,3

6.19 File :- NRG Rules file

Description :-

This file describes the rules that are utilised in the National Routeing Guide.

This is a text file and will be distributed in standard text format (RJGRRules-nnnn.txt) and as a Word file (RJGRRules-nnnn.doc), where nnnn is a version number. This will be available on the CDROM containing the NFM64 data, which all new customers will receive as a one-off datafeed. Any subsequent changes to the NRG rules will be reissued to existing customers by physical media.

Note that the header and footer records contained in the data feed files described in Section 4 are not included in these files.

It should be noted that the ENRG rules are based on the interpretation in SP0030, rather than based directly upon the original paper NRG.

6.20 File :- NFM64 files

Description :-

This is a single file of fares data that makes up the National Fares Manual Issue 64. These Fares are used as a Baseline by the Routeing Guide process for various functions. It is not the main source of Fares information. This is not a complete fare set; **only records with TICKET_CODE SOS, SDS, SVS and CDS are included, as these are the only relevant fares to be checked by an ENRG application.**

This file will only be available on CDROM. The file name is nfm64, and it is uncompressed. Its file size is 221mb.

Note that the header and footer records contained in the data feed files described in Section 4 are not included in this file.

As this is a large and static file it will form part of the normal datafeed but only be provided as a one-off load to new customers or by special request to existing customers.

Each record in the NFM files has been simplified to contain only the data necessary for ENRG use. **The fares contained in this file are used by the routeing guide to determine the appropriate routeing point(s).**

NFM64 Fare Records:

Key	Field Name	Length	Description
Y	FROM_NLC_CODE	4	The NLC code of the fare origin
Y	TO_NLC_CODE	4	The NLC code of the fare destination
Y	ROUTE_CODE	5	The route code pertaining to the flow.
Y	TICKET_CODE	3	The ticket code of the fare.
	FARE_PRICE	6	Fare price in pence.

7. DATAFEED SERVICE

7.1.1 Provision

The NRG Datafeed service will be provided as follows

- The Datafeed will be to a single site. This delivery address may be changed with agreement from Fujitsu.
- The Datafeed will contain an agreed set of files. The customer may select from those available in section 5.1
- The Datafeed will be transferred by electronic transfer or on an agreed physical media by post or other delivery service. These can include cartridge tape and CD.
- The transfers will be a combination of full file data sets and incremental updates. Full file data sets will be provided at the start of the service or whenever the number of changes necessitates a new version. Incremental changes will be transmitted on a daily frequency to the customer. The exception to this is the NFM64 file which will be a 'once only' datafeed or by special request to a customer who has experienced a loss of data.
- Backup copies of the files may be kept by the users who have been issued a backup licence. These will be issued automatically and free of charge.

7.1.2 Transfer Mechanism

The datafeeds will be scheduled on the Data Factory to run at a specific time during the evening/night.

FTP (File Transfer Protocol) will automatically transmit the agreed customers files to their server. For each file transferred it will create a temporary filename that is different from those defined in the above section. After the file has been transmitted successfully the file will be renamed to the expected file. This way the customer will know when the transfer is complete.

These temporary files may be monitored by the customer, if desired, to show progress of the transfer.

It will be the Customers responsibility to ensure update files are applied to their system in strict sequence. This information will be shown in the operating documentation.

It will be the Customers responsibility to inform Fujitsu of any errors that may have occurred. FTP will re-send packets of information where there is an error across the network. The last record of each file will contain the number of records sent.

It will be the Customer's responsibility to ensure necessary space and transfer mechanisms are in place. Sizing information for this datafeed is provided in section 4.

Each daily update file will be available on the RJIS server for one month, after which they will be deleted. There will be one full file copy retained on the server.

To reduce the file sizes and speed up the exporting process, the datafeed set will be available as a zipped file, and will be readable using WINZIP.

Users of UNIX systems will be supplied with UNZIP software and instructions on how to unpack the datafeed files (with particular references to parameters for new lines).

Each delivery will include one additional file listing the files comprising the set to be delivered. The file name is RJRGnnnn.RGI, and the file will consist of a header and footer as defined in section 5, enclosing a list of the files in the download set. Each file is listed on a separate line.

7.2 Data Integrity

When data for the National Routeing Guide is being loaded into the Data Factory, from its source, there will be validation of this data.

This validation will take the form of consistency checking. As the Data Factory is a Relational Database when data is loaded into the tables any key field that corresponds to data in other tables must be valid eg It will not allow distances to be added to Station codes that do not exist. This will ensure key data is consistent throughout the database.

7.3 Security

For each Customer who wants to receive electronic copies they will need to supply an IP address for RJIS to communicate with.

Fujitsu recommends a separate user is set up for the sole use of receiving datafeeds and has a password associated with it.

Customers who feel that security is a particular issue may receive specially encrypted datafeed files. This will be a separate service type.

7.4 Communications

7.4.1 Network

The network for the RJIS system is described in detail in document sp0007-RJIS Network Design Specification and in sp0008-RJIS Implementation Specification.

All files sent via the network will use FTP connected via TCP/IP. This requires that each external system that wants to receive files from RJIS must provide an IP address and directory name into which files are going to be placed.

Communication lines used for 'full file' transfer should be high speed links, 2mb per second. If 'update only' files are distributed then this line speed could be reduced to as low as 64kb per second. Advice will be given by Fujitsu on communications equipment to individual customers taking up this service.

7.5 Documentation

Operating documentation will be issued to customers taking this service. This will include:

- Operating Instructions
- List of agreed files
- File sizes
- File load sequence
- Estimated transfer time
- Fault check list



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8. REGISTERING FOR THE SERVICE

If this datafeed meets your requirements, you agree with the customers responsibilities and would like to obtain this service, then initial contact should be made to :-

RSP
3rd Floor
40 Bernard Street
London
WC1N 1BY

Tel: 0207 863 0814