GEOGRAPHIC NUMBER PORTABILITY (GNP)

Process Automation

ELECTRONIC LINK BETWEEN COMMUNICATIONS PROVIDERS

INTERFACE SPECIFICATION

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D1. Objectives and scope

This section defines the specification for the automation of electronic order handling / real time router activation link between Communications Providers for Geographic Number Portability.

The document covers the use of files, containing GNP orders/requests and corresponding files containing their acknowledgements, and similarly the use of files for Real Time Router requests and acknowledgements. These details have been agreed.

The intended audience is all Communications Providers involved in Geographic Number Portability.

D2. Generic Definitions & Terminology

D2.1 Terminology

CP	Communications Provider
GCP	Gaining Communications Provider - i.e. generator of the NPAR
LCP	Losing Communications Provider - i.e. generator of the NPAA
CUPID	Communications Provider ID (3 digit code)
GCUPID	CUPID of the GCP
LCUPID	CUPID of the LCP
NPAR	Number Portability Activation Request (i.e. an NP order)
NPAA	Number Portability Activation Acknowledgement
RTAR	Real Time Activation Request
RTAA	Real Time Activation Acknowledgement
<TBA>	To be agreed
OTS	One Touch Switch – process for consumer switching
SOR	Switch Order Reference in a successful OTS match response

D2.2 File Format Table Key

Key to the file format tables:

Column Key	Column Name	Description
Fn	Field Number	Number of the field in the record.
Field Name	Field Name	Name of the field in the record.
Off	Offset	Position offset of field within record.
Sz	Size	Size of field.
Type	Field Type	Type of values permitted in the field. See Field Types below..

M	Mandatory status	Whether field is: Y - mandatory in all cases. N - not mandatory. C - conditional dependant on other fields.
R	Rejection level	Whether field errors cause: F - file level rejection. R - record level rejection.
Description/Notes	Description/ Notes	Description of field and notes on its usage.

D2.3 Field types

Valid character sets for field:

Alpha	Characters [A-Z], [a-z], <space>
Numeric	Numeric characters only [0-9]
A32-126	ASCII 32 to 126 inclusive
Alpha/Numeric	Numeric characters [0-9], Characters [A-Z], [a-z], <space>
CR/LF	CR/LF pair. CR (ASCII 13) followed by LF (ASCII 10). Valid ONLY as end of record marker.

Note:
Only the characters specified in the table above are valid. Invalid characters will cause record or file rejection in line with the rules specified elsewhere in this document.

The Interface Specification is case insensitive throughout unless otherwise stated.

Numeric fields in some cases may be left or right justified with spaces. Mid spaces are invalid unless otherwise stated.

D2.4 Generic Rules

Orders (i.e. NPARs) which are submitted via the Electronic Link will be subject to the rules which appear in the End to End Process Description document (Ref: [1]). These rules are applicable to both the fax method and the Electronic Link.

D3. GNP File Types & Filenames

D3.1 File Types

Automated GNP involves the use of FOUR file types:
- NPAR file   Number Portability Activation Request file
- NPAA file   Number Portability Activation Acknowledgement file
- RTAR file   Real Time Activation Request file (for Real-Time routers)
- RTAA file   Real Time Activation Acknowledgement file (for Real-Time routers)

D3.2 Filename Formats

Each GNP file type has a specific filename format as follows:
- NPAR   snnnnnnP.rrr
- NPAA   snnnnnnQ.rrr
- RTAR   snnnnnnT.rrr
- RTAA   snnnnnnU.rrr

Where
- "s" is the status indicator (U, R, X or A) (see below).
- "nnnnnn" is the file number. Must be unique per file type and GCUPID.
- "rrr" is the 3 digit GCUPID.

D3.3 Filename Rules

The following rules apply to GNP filenames:
- Only filenames in the 12 characters (8.3) format "xxxxxxxx.xxx" will be recognised and processed.
- Filenames must contain UPPER case characters only.
- File types must only use characters P, Q, T or U. Other types will not be recognised and processed.
- Only filenames starting with recognised status character U, R or X will be recognised and processed.

D3.4 File Statuses

The following file statuses are recognised:

Filename Status (prefix)	Status Description
A	Transient file. This state indicates that the file transfer is either still in progress or has failed. Files in this status should NOT be processed.
U	Unprocessed file. Indicates file transfer was successful and that the file may be processed by the other CP.
X	Rejected file (NPAR & RTAR only). The submitted NPAR or RTAR file has been rejected due to invalid GCUPID.
R	Rejected file (NPAR & RTAR only). The submitted NPAR or RTAR file has been rejected (see File Rejection below) for reasons other than invalid GCUPID.

D3.5 Order of Validation

Order of validation is:
  (i) Filename validation (file rejection).
  (ii) Header record validation on NPAR/NPAA files (file rejection on NPAA).
  (iii) Data record validation (4-digit reject error codes within NPAA/RTAA).

Note: There is no particular order specified for record or file level validation.

D3.6 Generic File Level Rejection Rules

The following rules apply to file level rejection:
  • Only NPAR and RTAR files can be rejected using the X and R statuses. GNP automation does not support rejection of NPAA and RTAA files.
  • Only files of correct filename format (i.e. contain valid prefix, valid file type and valid "8.3" format) will be processed. Invalid files will be ignored (and may be deleted) rather than rejected by the LCP system.
  • If the GCUPID is invalid/unrecognised by the specified LCP, the file is rejected to an X status prefix. These X-prefix rejected files may be re-submitted to the LCP with the same filename (and file number) if necessary, but not re-submitted with an X prefix.
  • In a number of cases the file may be rejected to an R status prefix by the LCP. These R-prefix rejected files should not be re-submitted with the same filename. The problem should be corrected by the GCP and the data records regenerated in a new file (with new filename/filenumber).
  • If the filename is not unique (i.e. the file number is not unique for this GCUPID and file type) and the file has been previously processed or previously rejected (R/X-prefix), the file will be rejected by the LCUPID to an R/X status prefix (i.e. the previous R/X rejection may be overwritten).If a non-valid

character is present within the file the file will be rejected to an R status prefix. See Field Types Table for valid characters.
- If the file does not contain the correct number of correctly sized records the file will be rejected to an R status prefix.
- Other reasons for file level rejection are shown in the File Format Tables.
- If an LCP receives a file where the filename does not comply with the filenaming rules, the host system administrator may delete the file and as a courtesy advise the GCP before deletion.
- All spare or non mandatory fields need to be populated with the appropriate number of spaces as defined in the field record length to maintain the integrity of the file.

D3.7 File Processing

The following rules apply to the reading of files:
- Files are processed in order of receipt.
- Records within files are processed in the order they appear (i.e. from the top downwards).
- Files are only processed after deposit in the correct directories as per the interface specification.
- Once a file is opened, it CANNOT be rejected to X-prefix.

D4. NPAR - NP Activation Order Request

D4.1 File Format

An NPAR file must contain a HEADER record followed by one or more NPAR DATA records.

D4.1.1   NPAR Header Record

Fn	Field Name	Off	Sz	Type	M	R	Description/Notes
1	GCUPID	0	3	Numeric	Y	F	GCUPID. Must be valid CUPID (otherwise rejects to R-prefix) & must match GCUPID in filename
2	File Number	3	6	Numeric (with leading zeroes).	Y	F	Non-zero number identifying the file - must be unique within GCUPID. Must match file number in filename (otherwise rejects to R-prefix).
3	Number of NPARs	9	5	Numeric (with leading zeroes)	Y	F	Number of NPAR data records in the file. Must be valid (i.e. match the number of data records found), otherwise rejects to R-prefix.
4	NPAR Record Version	14	2	Numeric (01)	Y	F	Indicates NPAR record version. Currently 01. Must match record version field within each NPAR record (otherwise rejects to R-prefix.
5	LCUPID	16	3	Numeric or spaces	N		LCUPID. Optional field, though always populated by current implementations (as of Apr 2023).
6	File Type	19	1	Alpha (P)	Y	F	Indicates file type: P=NPAR. Must match file type in filename (otherwise rejects to R-prefix).
7	Reserved	20	469	Alpha/ Numeric	N		To make header the same size as data record. Ignored.
8	End of Record marker	489	2	CR/LF	Y	F	End of header record marker.
	Total size		491				

D4.1.2   NPAR Data Record

Fn	Field Name	Off	Sz	Type	M	R	Description/Notes
1	NPAR Record Version	0	2	Numeric (01)	Y	F	Indicates NPAR record version (currently 01). Must match record version specified in header record (otherwise file will reject with R-prefix).
2	GCUPID	2	3	Numeric	Y	F	Must match GCUPID specified in header & filename (otherwise file will reject with R-prefix).
3	GCP's Own Use	5	4	A32-126	N		Used by the GCP. The same value will be returned in the NPAA. Optional field
4	NPAR Order Number	9	8	Alpha/ Numeric	Y	R	Unique order number reference. Must be new & unique (within GCUPID) for order types A, B, C, L, Q & E. Otherwise must refer to existing order for other order types. Order number may contain leading/trailing spaces which will be ignored.
5	Telephone Number	17	11	Numeric /spaces	Y	R	Specified telephone number to be ported (up to 11 digits). May contain leading/trailing spaces which will be ignored.
6	Order Type	28	1	Alpha	Y	R	Defines type of service requested. Valid order types are: A = Provide B = Return to Donor C = Cease K = Cancel Own L = Cancel Other's M = Change (Modify) P = Re-present X = Switch Prefix Change S = Subport LCP* T = Subport RH* *See Note 1: NPAR Notes. Q = Switch Port Query E = Switch Port Execute

Fn	Field Name	Off	Sz	Type	M	R	Description/Notes
7	Porting Date / Time	29	12	Numeric or spaces	C	R	Date and time that the service provisioning is to be performed. Format: YYYYMMDDHHMM or <Spaces> for order types K & L (cancels). For order types Q & E, the request is for an immediate port. The porting date / time should be populated with sysdate / systime of the request, and may be ignored by the recipient.
8	Spare	41	60	A32-126	N		SURNAME
9	Spare	101	5	A32-126	N		TITLE
10	Spare	106	5	A32-126	N		INITIAL
11	Spare	111	40	A32-126	N		HOUSE NAME
12	Spare	151	40	A32-126	N		HOUSE No & STREET
13	Spare	191	30	A32-126	N		AREA
14	Spare	221	30	A32-126	N		TOWN
15	Spare	251	30	A32-126	N		COUNTY / CITY
16	Post Code 1	281	4	Alpha/ Numeric	Y		Field must be included on all order types except C. Note that order types Q & E will not validate the postcode, but it should be included for audit trail purposes.
17	Post Code 2	285	4	Alpha/ Numeric	Y		Field must be included on all order types except C.
18	Exchange / Switch Prefix	289	6	Numeric or Spaces	C	R	Recipient Exchange/Switch Identity or <Spaces>. If present, must always have leading digit of "5". Mandatory on Provide and subsequent Change/Re-present order types.
19	Spare	295	20	Alpha/ Numeric Or Spaces	N	R	CUSTOMER ACCOUNT No
20	Spare	315	4	Spaces	N	R	DONOR SWITCH TYPE

Fn	Field Name	Off	Sz	Type	M	R	Description/Notes
21	Mobility Post Code	319	104	A32-126	N		Used to identify the current postcode in the case of moving customers. Post code should be placed in rounded brackets ().
21 A	SOR	423	36	Hexadec imal with hyphens	O	R	Switch order reference from an successful OTS match. The SOR is in the form of a UUID.
22	NPAR Order Number Id	459	2	Numeric Or Spaces	N		Used to identify individual orders within an Order Number. Must in range 00-99. Optional field.
23	Other CP's Order Number	461	8	Alpha/ Numeric Or Spaces	C	R	Mandatory only for cancel-other (L) orders. Used to specify "other's" order number. Otherwise <spaces>.
24	Other CUPID	469	3	Numeric Or Spaces	N		CUPID of recipient of order. Optional for cancel-other (L) orders. Used to specify CUPID of original order. Not validated.
25	Third Party CUPID	472	17	Alpha/ Numeric	N		CUPID of Third Party CP for order types S&T only. *See Note 2: NPAR Notes.
26	End of Record marker	489	2	CR/LF	Y	F	End of data record marker.
	Total		491				

Note 1: NPAR Notes

Order Types S & T for Subsequent porting can only be used with the prior agreement of the receiving operator.

Note however that order types Q and E support porting scenarios which are provide, RRH or subsequent porting.

Note 2: NPAR Notes

Field 25 has been designated to assist with Subsequent port orders where CPs systems may require the CUPID of both rangeholder and losing CP.

Field 25 should contain:

      RH CUPID where the order type is Subport LCP and

      LCP CUPID when the order type is Subport RH

For OTS Porting which is a subsequent port, field 25 should contain:

      RH CUPID for order types Q and E sent to the LCP and

      LCP CUPID for order type E sent to the RH

D5. NPAA - NP Activation Order Acknowledgement

D5.1 File Format

An NPAA file must contain a HEADER record followed by one or more NPAA DATA records.

A NPAA record is generated in response for each NPAR record processed.

There is no correlation between the records in an NPAA file and those in a processed NPAR file. For example, an NPAR file may contain order numbers 1-100, but the NPAAs for those NPARs may be spread across any number of NPAA files.

In the case of multiple orders for the same order number (e.g. Change orders), the LCP will generate corresponding NPAAs in the same sequence in which the incoming NPARs were received. Note, the LCP may place the NPAAs in the same NPAA file (in order of generation) or in separate files. (Also, note the use of the Order Number Id to help in such cases).

NPAA files and records are not rejected by the GCP.

D5.1.1 NPAA Header Record

Fn	Field Name	Off	Sz	Type	M	R	Description/Notes
1	GCUPID	0	3	Numeric	Y		GCUPID. Should match GCUPID in filename.
2	File Number	3	6	Numeric (with leading zeroes).	Y		Non-zero number identifying the file. Should be unique within GCUPID.
3	Number of NPAAs	9	5	Numeric (with leading zeroes).	Y		Number of NPAAs in the file.
4	NPAA Record Version	14	2	Numeric (01)	Y		Indicates record version of NPAA. Currently 01.
5	LCUPID	16	3	Numeric or Spaces	N		LCUPID. Optional field.
6	File Type	19	1	Alpha (Q)	Y		Indicates file type: Q=NPAA. Should match file type in filename.
7	Reserved	20	103	Alpha/ Numeric	N		To make header the same size as data record. Ignored.
8	End of Record marker	123	2	CR/LF	Y		End of header record marker.
	Total		125				

D5.1.2   NPAA Data Record

Fn	Field Name	Off	Sz	Type	M	R	Description/Notes
1	NPAA Record Version	0	2	Numeric (01)	Y		Indicates NPAA record version (currently 01). Should match record version specified in header record.
2	GCUPID	2	3	Numeric	Y		Should match GCUPID specified in header & filename.
3	GCP's Own Use	5	4	A32-126	C		Used by the GCP. Should be same as that specified in NPAR (if present) otherwise optional field.
4	NPAR Order Number	9	8	Alpha/ Numeric	Y		Should correspond to NPAR order number.
5	Telephone Number	17	11	Numeric /Spaces	Y		Telephone number to be ported (up to 11 digits). Should correspond to that in NPAR order.
6	Order Type	28	1	Alpha	Y		Type of service requested. Should correspond to that in NPAR order.
7	Porting Date / Time	29	12	Numeric Or Spaces	C		Date & Time at which port is to take place. Format: YYYYMMDDHHMM or <Spaces> for Cancel orders. Should normally correspond to that in NPAR order.
8	NPAR Order Number Id	41	2	Numeric Or Spaces	C		Used to identify individual orders within Order Number. Should correspond to that in NPAR otherwise optional field.
9	Reserved	43	10	Alpha/ Numeric	N		Reserved for future use. Ignored.
10	Rejection Code 1	53	4	Numeric	Y		Error code for the NPAR record being rejected. "0000" indicates no rejection otherwise 4 digit error code. At least one error code should be provided (up to 10 supported in NPAA fields 10-19). Value of "0000" implies fields 11-19 may be ignored. The NPAA error code list is specified in Ref [1].
11	Rejection Code 2	57	4	Numeric	N		Optional. See field 10.
12	Rejection Code 3	61	4	Numeric	N		Optional. See field 10.

Fn	Field Name	Off	Sz	Type	M	R	Description/Notes
13	Rejection Code 4	65	4	Numeric	N		Optional. See field 10.
14	Rejection Code 5	69	4	Numeric	N		Optional. See field 10.
15	Rejection Code 6	73	4	Numeric	N		Optional. See field 10.
16	Rejection Code 7	77	4	Numeric	N		Optional. See field 10.
17	Rejection Code 8	81	4	Numeric	N		Optional. See field 10.
18	Rejection Code 9	85	4	Numeric	N		Optional. See field 10.
19	Rejection Code 10	89	4	Numeric	N		Optional. See field 10.
20	NPAA Notes	93	30	Alpha/ Numeric	N		Notes. Where order has failed with Error Code 30 see Note 1.
21	End of Record marker	123	2	CR/LF	Y		End of data record marker.
	Total		125				

Note 1: NPAA Notes

Field 20 has been designated for NPAA Notes.

Special use of NPAA Notes field for NPAA response to Error Code 30 - Telephone number already ported.

When an NPAR has been received and rejected by the LCP and the error reasons include Error Code 30, the LCP should, in accordance with the GNP End to End Process Manual, populate the NPAA Notes field with the following text:

LCP=<CUPID>

Where <CUPID> = The CUPID of the CP who currently provides service for the customer.

Where the current CP CUPID cannot be determined the field should be populated with the following text:

LCP=UNKNOWN

For NPAAs that have been rejected for reasons other than Error Code 30 the field may be populated with a brief note containing any useful additional information.

For OTS Porting, response code 60 is equivalent to code 30, but is deemed a warning code and not a reject. The NPAA Notes field should be populated as for code 30.

D6. RTAR - Real-Time Activation Requests

RTAR/RTAA is still under consideration by the GNPIAF - this is not yet current functionality.

Note that OTS Porting is a single stage order, which is activated by the recipient CP as quickly as possible without any need for any activation request.

D6.1 File Format

An RTAR file contains a single data record.

N.B. RTR functionality requires the push/push operation over a semi or permanent fixed link. Testing of the industry agreed standard has identified a number of process and interface issues that need to be addressed before this can be progressed further.

D6.1.1   RTAR Data Record

Fn	Field Name	Off	Sz	Type	M	R	Description/Notes
1	RTAR Record Version	0	2	Numeric (01)	Y	F	Indicates record version of RTAR (initial value = 01). If invalid file will be rejected with R-prefix.
2	File Number	2	6	Numeric (with leading zeroes).	Y	F	Non-zero number identifying the file. Must be unique within GCUPID. Must match GCUPID in filename (otherwise rejects to R-prefix).
3	File Type	8	1	Alpha (T)	Y	F	Indicates file type: T = RTAR. Must match file type in filename (otherwise rejects to R-prefix)..
4	GCUPID	9	3	Numeric	Y	F	GCUPID. Must be valid CUPID (otherwise rejects to X-prefix) & must match GCUPID in filename (otherwise rejects to R-prefix).
5	GCP's Own Use	12	4	A32-126	N		Used by the GCP. The same value will be returned in the RTAA. Optional field.
6	RTAR Order Number	16	8	Alpha/ Numeric	Y		May be different from the original NPAR Order Number. Does not need to be unique, i.e. request may be resubmitted with same RTAR order number. Not validated.
7	RTAR Order Number Id	24	2	Numeric or Spaces	N		Used to identify individual orders within Order Number. Must in range 00-99. Optional field.

Fn	Field Name	Off	Sz	Type	M	R	Description/Notes
8	LCUPID	26	3	Numeric or Spaces	N		LCUPID. Optional field.
9	Telephone Number	29	11	Numeric /Spaces	Y	R	Telephone number to be ported (up to 11 digits). May contain leading/trailing spaces which will be ignored.
10	Order Type	40	1	Alpha	Y	R	Type of service request required. A= Activate Now
11	RTAR Date / Time[i]	41	12	Numeric	Y		Date & Time the RTAR was generated. Format: YYYYMMDDHHMM. This is not necessarily the date/time the RTAR was send to the "other" Communications Provider Not validated.
12	Reserved	53	32	Alpha/ Numeric	N		Reserved for future use. Ignored.
13	End of Record marker	85	2	CR/LF	Y	F	End of RTAR record marker.
	Total		87				

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[i] Date & time stamps have still to be agreed by the GNPIAF. The whole issue of measuring SLA's is still to be agreed.

D7. RTAA - Real-Time Activation Acknowledgements

D7.1 File Format

An RTAA file contains a single data record.

An RTAA record is generated in response to each RTAR record processed.

There is no correlation between the order RTAR records are processed and order of which RTAA records are generated in acknowledgement. They are linked by RTAR order number.
RTAA files and records are not rejected by the GCP.

D7.1.1   RTAA Data Record

Fn	Field Name	Off	Sz	Type	M	R	Description/Notes
1	RTAA Record Version	0	2	Numeric (01)	Y		Indicates record version of RTAA (initial value = 01).
2	File Number	2	6	Numeric (with leading zeroes).	Y		Non-zero number identifying the file. Should be unique within GCUPID. It does not have to match the file number of the RTAR.
3	File Type	8	1	Alpha (U)	Y		Indicates file type: U = RTAA. Should match file type in filename.
4	GCUPID	9	3	Numeric	Y		GCUPID. Should match GCUPID in the filename.
5	GCP's Own Use	12	4	A32-126	C		Used by the GCP. Should be same as that specified in RTAR (if present) otherwise optional field.
6	RTAR Order Number	16	8	Alpha/ Numeric	Y		Should correspond to RTAR Order Number in RTAR.
7	RTAR Order Number Id	24	2	Numeric or Spaces	C		Used to identify individual orders within Order Number. Should correspond to that in RTAR otherwise optional field.
8	LCUPID	26	3	Numeric or Spaces	N		LCUPID. Optional field.
9	Telephone Number	29	11	Numeric /Spaces	Y		Telephone number ported (up to 11 digits). Same as that in RTAR..
10	Order Type	40	1	Alpha	Y		Type of service request requested. Should correspond to that on RTAR order.

Fn	Field Name	Off	Sz	Type	M	R	Description/Notes
11	RTAA Date / Time	41	12	Alpha/ Numeric	Y		Date and time RTAA was generated. Format: YYYYMMDDHHMM. Note: this is not the time the port was attempted or the time the RTAA is sent.
12	Reserved	53	8	Alpha/ Numeric	N		Reserved for future use. Ignored.
13	Rejection Code 1	61	4	Numeric	Y		Error code for the RTAR order being rejected. "0000" indicates no rejection otherwise 4 digit error code. At least one error code must be provided (up to 3 supported in RTAA fields 13-15). Value of "0000" implies fields 14-15 may be ignored. The RTAA error code list is specified in Appendices.
14	Rejection Code 2	65	4	Numeric	N		Optional. See field 13.
15	Rejection Code 3	69	4	Numeric	N		Optional. See field 13.
16	Reserved	73	20	Alpha/ Numeric	N		Reserved for future use. Ignored.
17	End of Record marker	93	2	CR/LF	Y		End of record marker.
	Total		95				

D8. GNP File Transfer

Please note that at the time of writing (April 2023), only a very small number of CPs are exchanging records in accordance with this interface specifications, and they are using secure forms for FTP to communicate. References below to ISDN, PPP, link timeouts and insecure forms of FTP are likely to be out of date.

This small set of CPs are interacting using what could be termed "micro batches", in that files are generated and pushed or pulled at intervals of around 3 to 5 minutes – so giving a close to "real time / transactional" feel to the overall customer experience.

Note that OTS Porting makes no change to file transfer.

D8.1 Standards for File Transfer

The minimum <u>standard</u> protocol stack for GNP file transfer over the Electronic Link is PPP, TCP/IP and FTP.

There will be two possible methods of file transfer. The approach used is subject to agreement between individual pairs of Communications Providers, and each Communications Provider in the pair will use the same method.

The two methods/links are:
- (i) push/pull
- (ii) push/push. N.B. Push/push has not yet been completed and requires further development and testing.

D8.1.1 Push/Pull Overview

Push/Pull is suitable only for NPAR/NPAA file types.

NPAR files are sent from the GCP to the LCP, i.e. *NPAR files are pushed*.

NPAA files are retrieved from the LCP by the GCP, i.e. *NPAA files are pulled*.

The standard for a Push/Pull link will be ISDN.

As a result of the NP reciprocal arrangement, each CP will act as both a GCP and an LCP.

D8.1.2 Push/Push Overview

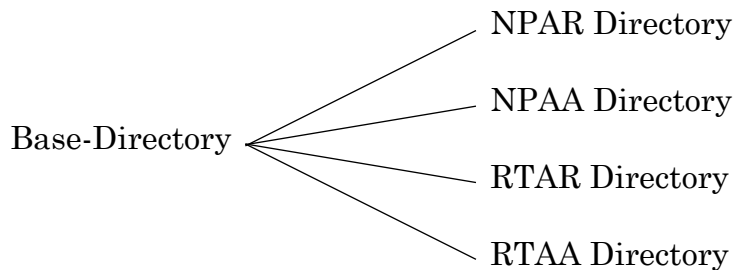Push/Push is suitable for all GNP file types.

NPAR/RTAR files are sent from the GCP to the LCP, i.e. *NPAR/RTAR files are pushed*.

NPAA/RTAA files are sent from the LCP to the GCP, i.e. *NPAA/RTAA files are pushed*.

The standard for Push-Push links will be dial-up ISDN.

D8.2 Generic Directory Structure

A CP using either push/pull or push/push will require a system with the following directory structure. Four sub-directories should exist under a base directory.

```
                                           NPAR Directory

                                           NPAA Directory
        Base-Directory  <
                                           RTAR Directory

                                           RTAA Directory
```

All directory names are in UPPER CASE.

D8.3 Generic File Transfer Process

GNP files are either sent or retrieved using FTP TCP/IP protocol.

FTP requires the following configuration information on the LCP system:
- IP address
- Username
- Password
- Base (or home) directory

Files are sent into or retrieved from sub-directories dependant on file type as specified above.

In order to ensure file integrity, a file status prefix of "A" should be used whilst transferring the file, and changed to the correct status prefix ("U", "R" or "X") only when the transfer has been completed successfully.

D8.4 Storage/Re-transfer of files

A copy of all NPAA files should be stored by the LCP following transfer in case the GCP requests a re-send or re-retrieve of a file.

Files should be available by the LCP for an agreed minimum period (see Appendices).

When a re-send/re-retrieve is requested by the GCP, a copy of the original file (same filename/file number) should be made available using the normal NPAA process.

A file should be made available for re-send/re-retrieve within an agreed period (see Appendices).

D8.5 Link Timeout

Purpose
To provide non-discriminatory service to all clients who wish to use the host system.

<u>Terminology</u>
Client: The system initiating the session
Host: The system responding to the client initiation

It is the responsibility of the client to terminate the session after data transfer is complete

In the event of inactivity on an open session,   or the session being artificially kept open without data transfer (e.g. ping), the host may terminate the session after 10 minutes.

D9. Push/Pull File Transfer

D9.1 NPAR file handling

NPAR files are send by the GCP to the LCP's NPAR directory. The transient prefix of "A" should be used whilst sending the file. The "U" status prefix should be used to indicate that the transfer is completed and that the NPAR file is ready to be processed by the LCP.

The LCP should process NPAR files in the NPAR directory. It is suggested that these should be stored by the LCP for audit purposes.

The LCP may reject an entire NPAR file for various reasons (specified elsewhere in this document). In these cases a copy of the rejected NPAR file should be placed with either an "R" or "X" status prefix in the LCP's NPAA directory.

The GCP may re-submit a rejected X-prefix NPAR file using the same filename.

The GCP may only re-submit a rejected R-prefix NPAR file using a new unique NPAR file number (and hence new filename).

D9.2 NPAA file handling

NPAA files are generated by the LCP and placed in the LCP's NPAA directory. The "U" status prefix should be used to indicate that the file generation is completed and that the NPAA file is ready to be retrieved by the GCP.

The GCP should retrieve the NPAA file from the LCP's NPAA directory. If transferred successfully the GCP should delete the file from the LCP's NPAA directory.

The LCP should keep a copy of the NPAA file in case the GCP requests a re-retrieval of the file.
NPAA files are not subject to automatic rejection handling. If the GCP finds fault with a NPAA file this should be dealt with manually.

D10. Push/Push File Transfer

D10.1 NPAR file handling

NPAR files are sent by the GCP to the LCP's NPAR directory. The transient prefix of "A" should be used whilst sending the file. The "U" status prefix should be used to indicate that the transfer is completed and that the NPAR file is ready to be processed by the LCP.

The LCP should process NPAR files in the NPAR directory. Once processed the LCP should remove the NPAR file from the NPAR directory. It is suggested that these should be stored by the LCP for audit purposes.

The LCP may reject an entire NPAR file for various reasons (specified elsewhere in this document). In these cases the rejected NPAR file should be sent back to the GCP system and placed in the GCP's NPAA directory with an "R" or "X" status prefix.

The GCP may re-submit a rejected X-prefix NPAR file using the same filename.

The GCP may only re-submit a rejected R-prefix NPAR file using a new unique NPAR file number (and hence new filename).

D10.2 NPAA file handling

NPAA files are generated by the LCP and sent back to the GCP system and placed in the GCP's NPAA directory with an "U" status prefix. The transient prefix of "A" should be used whilst sending the file.

The LCP should keep a copy of the NPAA file in case the GCP requests a re-send of the NPAA file.

NPAA files are not subject to automatic rejection handling. If the GCP finds fault with a NPAA file this should be dealt with manually.

D10.3 RTAR file handling

RTAR files are sent by the GCP to the LCP's RTAR directory. The transient prefix of "A" should be used whilst sending the file. The "U" status prefix should be used to indicate that the transfer is completed and that the NPAR file is ready to be processed by the LCP.

The LCP should process RTAR files in the RTAR directory. Once processed the LCP should remove the RTAR file from the RTAR directory. It is suggested that these should be stored by the LCP for audit purposes.

The LCP may reject an entire RTAR file for various reasons (specified elsewhere in this document). In these cases the rejected RTAR file should be sent back to the GCP system and placed in the GCP's RTAA directory with an "R" or "X" status prefix.

The GCP may re-submit a rejected X-prefix RTAR file using the same filename.

The GCP may only re-submit a rejected R-prefix RTAR file using a new unique NPAR file number (and hence new filename).

D10.4 RTAA file handling

RTAA files are generated by the LCP and sent back to the GCP system and placed in the GCP's RTAA directory with an "U" status prefix. The transient prefix of "A" should be used whilst sending the file.

There will be no facility for re-send of RTAA files.

RTAA files are not subject to automatic rejection handling. If the GCP finds fault with an RTAA file this should be dealt with manually.

D11. Appendices

D11.1 Recommended hardware/software

Recommended hardware and software for implementation of the minimum standard link is as follows:
- PC running latest operating system, with ISDN dial-up facility both ways (dial in only for each Communications Provider).
- TCP/IP for FTP.

D11.2 RTAA Error Codes

RTAR Rejection codes are:

Code	Description
0000	Success (no error)
0001	Other (catchall)
0002	Cannot process file.
0003	Operational error (after file was processed).

These may be expanded when RTAR /RTAA processing is implemented.

D11.3 NPAA Retention/Availability

NPAA file retention period is minimum of 7 calendar days.

NPAA file availability for re-send/re-retrieve is within 2 working hours.

D11.4 Escalation of Operational Issues

Contingency arrangements for order handling drop back, due to Automation problems need to be commercially - bilaterally agreed and pursued. Industry recognised contingency is the manual fax level (presently 100 orders/week).

D12. References

[1] Industry Scoping Document (for the implementation of this specification)

D13. History

Version	Date	Author(s)	Comments
2	Feb 2008	NP Process Group	Amendments made to conform to current Terminology (Communications Provider rather than Operator, CUPID rather than LOPID). Amendments made to conform to recent changes in validation criteria and mobility changes. This is intended to have no impact upon the actual systems themselves.
3.4	Dec 2018	Bruce Benson Openreach	In NPAR specification, added post port prefix change, subport LCP and subport RH to the list of possible order types. Note that these can only be used with the prior agreement of the receiving operator. Note 2 added to confirm use of field 25 in NPAR specification
4.0	March 2025	Niall Gillespie BT Group	Updated to support OTS Porting with new order type Q & E, and new field 21A to transport the SOR.

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