

	Commercial in Confidence GP2GP Supplementary Specification: Harvesting Management Information			
	Programme	Programme & Service Delivery	DOCUMENT RECORD ID KEY	
	Sub-Prog / Project	GP2GP	<i>NPFIT-PC-BLD-0171.02</i>	
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	Version Date	13-Feb-2014	Status	Final

GP2GP Supplementary Specification

Subject	GP2GP: Harvesting Management Information
Reference	GP2GP Issue
Supplier(s)	All
Summary	This supplementary specification provides the detailed requirements for harvesting of Management Information from supplier systems and delivering to a central Authority repository for analysis and reporting.
Justification	Current Management Information reporting from supplier systems performing GP2GP transfers is minimal. GP2GP require Management Information in order to make informed decisions about future developments and as a means to identify problems with existing deployments. This is a key tool in improving the success of GP2GP interactions.
Rollout Dependencies	The following dependencies apply: with GP2GP Compliance Specification V1.1a The Authority implementation of Supplementary Specification: Processing Management Information

1 Document Management

1.1 Amendment History:

Issue	Version	Date	Amendment History
01	0.1	26-Aug-2010	This requirement was originally documented in the GP2GP Requirements Specification R2.2 specification published in October 2009 Release 6.1. Further analysis has changed the original specification and this document was created as part of the 2010 specification review and rewrite. Draft for peer review
01	0.2	2-Sept-2010	Results of peer review.
01	0.3	21-Sept-2010	Results of alignment with CCLM Supplementary Specification.
01	0.4	14-Jan-2011	Tabularised requirements and re-ordered document.
01	0.5	18-Jan-2011	Updates following peer review.
01	0.6	25-Jan-2011	Draft for approval
01	1.0	25-Jan-2011	Approved
02	1.1	13-Feb-2014	Updated: HR5 added PFS RR11 modified based on supplier feedback FS numbering corrected Examples updated

1.2 Forecast Changes:

Anticipated Change	When
No material change anticipated.	

1.3 Reviewers:

This document must be reviewed by the following. Delegate as necessary.

Name	Title / Responsibility	Date	Version
Will Nossiter	GP2GP Technical Architect	21-Sept-2010	0.3
Mike Curtis	DoH Tech Office	21-Sept-2010	0.3
Jill Hepworth	GP2GP Programme Manager	21-Sept-2010	0.3
Pete Whitcombe	GP2GP Integration and Clinical Validation Manager	21-Sept-2010	0.3
Dave McAvenue	GP2GP Integration and Clinical Validation Lead	21-Sept-2010	0.3
Dave Bagnall	GP2GP Compliance Test Manager	21-Sept-2010	0.3
Ramsey Baker	GP2GP Deployment Manager	21-Sept-2010	0.3
John Williams	GP2GP Clinical Lead	21-Sept-2010	0.3
Leo Fogarty	SCR Clinical Lead	21-Sept-2010	0.3
Pete Salisbury	Management Information content reviewer	18-Jan-2011	0.3-0.5

Name	Title / Responsibility	Date	Version
	MicroTest	21-Sept-2010	0.3
	EMIS	21-Sept-2010	0.3
	InPractice	21-Sept-2010	0.3
	iSoft	21-Sept-2010	0.3
	TPP / CSC	21-Sept-2010	0.3

1.4 Approvals:

This document requires the following approvals:

Name	Signature	Title / Responsibility	Date	Version
Kemi Adenubi		The Authority GPIT Programme Director		0.6
Dave Bagnall		GP2GP Compliance Manager		0.6
Jill Hepworth		GP2GP Programme Manager		0.6

1.5 Distribution:

Reviewers and approvers plus:

Name	Title / Responsibility	Date	Version
Alasdair Thompson	GPSoc		0.6
Alan Hassey	GP2GP Project Board Member		0.6
Paul Cundy	GP2GP Project Board Member		0.6
	GPSoc Release Managers		0.6

1.6 Document Status:

This is a controlled document. This document version is only valid at the time it is retrieved from controlled filestore, after which a new approved version will replace it.

On receipt of a new issue, please destroy all previous issues (unless a specified earlier issue is base-lined for use throughout the programme).

1.7 Related Documents:

This document is a supplementary specification to the GP2GP Requirements Specification. This specification cannot be implemented in isolation. The use case UC2 Transfer and Analyse MI should also be consulted for how to implement this specification.

1.8 Glossary of Terms:

List any new terms created in this document. Mail the NPO Quality Manager to have these included in the master glossary above [1].

Term	Acronym	Definition
Comma Separated Values	CSV	Comma separated value – file format. This specification defines different record types so the number of fields in different record types will vary. Field lengths will vary dependent upon content.
Data Transfer Service	DTS	Service provided by TMS.
Transaction Messaging Spine	TMS	Transaction Messaging Spine.
Management Information	MI	Information recovered from permanent patient registrations or use of GP2GP, to be formatted into management reports.

2 Specification Detail

This document provides the specification for the capture of Management Information and reporting capability. The specification has been changed since an earlier edition to require the supplier systems to provide conversation based data for the Authority to process.

A supplier will provide only one side of a conversation for each GP Practice, although may provide the software for both parties where they are the supplier to the Requesting and Sending GP Practices. The Authority will reassemble the full conversation data to enhance the overall reporting facilities.

2.1 Message structure

The message uses CSV format with multiple record types. Certain key text fields are enclosed in double quotes ("delimited") – these are identified in the record definitions below.

The record set for a practice consists of a header record followed by zero or more data records, one for each representation in a conversation, either as Requester or Sender, followed by a footer record. The data records can appear in any order between the header and footer.

Example Record layout:

```
Header
  Requester Data Record
  Requester Data Record
  Sender Data Record
  Requester Data Record
  Sender Data Record
  Sender Data Record
Footer
```

The header record will contain the date for which the record set contains records. This will be a 24 hour period from midnight to midnight. If the system made no requests and received no requests within the time period, the record set will still be sent, but will include only the header and the footer records (no data records). One record set is to be sent for every 24 hour period. Where multiple practices are reported from one source (hosted environments or where suppliers choose to collect and send the daily MI data from a central location) practice MI record sets can be serialised.

Example Serialised Record layout:

```
Header
  Requester Data Record
  Requester Data Record
  Sender Data Record
  Requester Data Record
  Sender Data Record
  Sender Data Record
Footer
Header
  Requester Data Record
  Requester Data Record
  Sender Data Record
```

```

Requester Data Record
Sender Data Record
Sender Data Record
Footer
Header
Requester Data Record
Requester Data Record
Sender Data Record
Requester Data Record
Sender Data Record
Sender Data Record
Footer
...

```

The date field combined with the ODS code in the header record will provide a unique identifier for the record set. It is the responsibility of the GP Practice software to keep track of date and time periods for which data was sent. The Authority system will flag errors for ODS and date combinations where data is missing.

In the event of a rollback situation, the ODS and date combination will be used to reload the data.

2.1.1 Data Record types

This approach has led to the construction of different data record types according to the software's role in the conversation (i.e. Requester or Sender).

The first record type "RR" is for the system in the role of a Requester. One of these records should exist for each new patient registration irrespective of whether an electronic request was ever made.

The second record type "SR" is for the system in the role of Sender. One of these records should exist for each EHR Extract request received, even if it is not fulfilled.

2.2 Requirements

The following general requirements apply:

Req ID	Requirement Text	Priority
MI01	The supplier shall capture information on each transaction such that Management Information records can be provided to the Authority.	Must
MI02	The supplier shall create Management Information records in the format prescribed by the authority in this specification.	Must
MI03	The Management Information records shall contain one header record at and one footer record, per practice, per reporting period.	Must
MI04	The header record shall appear at the start of the practice record for the reporting period. The footer record shall appear at the end of the practice record for the reporting period.	Must
MI05	The Management Information records shall contain one Requestor or Sender record as applicable for each action in the GP2GP process.	Must

Req ID	Requirement Text	Priority
MI06	The header record shall contain the date for which the record set contains records. This will be a 24 hour period from midnight to midnight.	Must
MI07	If the GP Practice system made no requests and received no requests within the time period, the record set shall still be created (and sent), but shall include only the header and the footer records (no data records).	Must
MI08	One record set shall be created and sent for every 24 hour period. Where multiple GP practices are reported from one source (hosted environments or where a supplier chooses to collect and send the daily Management Information records from a central location) practice MI record sets can be serialised.	Must
MI09	At least once per week, supplier systems shall submit Management Information to the Authority.	Must
MI10	The header record shall contain a date field and ODS code to provide a unique identifier for the record set. The GP Practice supplier software shall keep track of date and time periods for which data was sent. In the event of a rollback situation, the combination of date and ODS code shall be used to reload the data into the the Authority system for analysis.	Must
MI11	For each patient registration a data record marked "RR" shall be created. This shall be recorded by the Requesting system. One of these records shall exist for each new patient registration irrespective of whether an EHR request was ever made.	Must
MI12	For each EHR Request a data record marked "SR" shall be created. This shall be recorded by the system receiving the EHR Request. One of these records shall exist for each EHR Extract request received, even if it is not fulfilled.	Must
MI13	The Authority will process the MI reports received and identify any missing information or missing reports. The supplier shall re-submit the MI reports affected and any missing information or reports at the request of the Authority within one week of the request. The supplier system shall resubmit the missing information using the normal delivery mechanism.	Must

2.3 Data transfer

2.3.1 Compression

Based on the volumetrics below, no file compression is necessary. DTS provides a transfer facility for files up to 50MBytes and this limit should never be reached with uncompressed ASCII Management Information transfers.

Use of serialised record sets will improve the efficiency of the message transport.

2.3.2 Delivery mechanism

DTS will be used to transfer the files from the GP systems

The MI files will be made available weekly, within 48 hours of the end of the week. The week-endpoint can be agreed.

MI records which are transmitted and subsequently updated in a following weekly time period will be retransmitted in full. The Authority will resolve the duplication.

2.3.3 Security & integrity of data

No patient record data is included in the Management Information data.

Security and integrity of the data within the GP systems will be the responsibility of the GP system supplier.

Standard DTS security measures are sufficient for the transfer of Management Information.

No hashing or encryption is required.

Security and integrity of the data within the data transfer will be provided by the DTS Service. Data at rest, on supplier or the Authority servers, is to be treated as "Commercial in Confidence". There is no data relating to individual persons recorded within the MI data set, however, the information may be commercially beneficial to an organisation that possesses a copy.

Publication of reports generated from the collected and collated information will be performed under the existing the Authority processes.

2.4 Data Transfer Requirements

The following data transfer requirements apply:

Req ID	Requirement Text	Priority
MI20	The supplier should serialise the data from multiple GP Practice systems where centrally hosted to minimize the file sizes transmitted.	Should
MI21	The supplier shall transfer the Management Information records via DTS to an address supplied by the Authority. DTS provides a transfer facility for files up to 50 Mbytes and suppliers shall not attempt to transfer files over this limit. Any files approaching this limit shall be broken up into many files after a suitable footer record.	Must
MI22	The Management Information records shall be made available weekly, within 48 hours of the end of the week. The end of the week is Sunday at midnight.	Must
MI23	Management Information records which are transmitted and subsequently updated in a following weekly time period shall be retransmitted in full. The Authority will resolve the duplication.	Must
MI24	Patient identifiable or EHR data shall not be included in the Management Information records.	Must
MI25	The GP system supplier shall be responsible for the security and integrity of the data within the GP system.	Must
MI26	The GP system supplier shall use standard DTS security measures for the transfer of Management Information. No hashing or encryption shall be used beyond this.	Must
MI27	Security and integrity of the data within the data transfer will be provided by the DTS Service. Data at rest, on the supplier system, shall be treated as "Commercial in Confidence".	Must

3 Data Requirements

The following subsections detail the record types associated with Management Information records where the software is in the role of Requester or Sender. The header record also includes information about the software in use by the practice, its identity and its status.

3.1 Header

Header for MI file is detailed below. This header is **always** sent even if there are no permanent registrations made or received EHR requests. The header contains current application status information pertaining to the practice and MI time period definition.

Requesting system MI data recording - header				
#	Data Item	Data Description	Max Len	
HR1	Record Type	"HR"	2	
HR2	Practice ODS	ODS of the GP Practice that created the report	10	
HR3	Practice ASID	ASID of the GP Practice that created the report e.g. A12345-123456	20	
HR4	"Requesting software name and version"	Name and version of the GP software in use at the location identified by the ODS code. Format: "Supplier_Product_Version" using underscore character as a delimiter and enclosing the data in double quotes. Ideally this is sourced from a configuration file or similar that changes when upgrades are made. Version may include a build number if this is deemed useful when reporting errors. Truncate product NOT version if field too small.	100 incl quot es	

Requesting system MI data recording - header				
#	Data Item	Data Description	Max Len	
HR5	Application Status	<p>15 byte string for descriptors of the application configuration</p> <p>1st byte – GP2GP: 1 = supported, 2 = supported but switched off, 0 = not supported</p> <p>2nd byte – Large Messaging: 1 = supported, 2 = supported but switched off, 0 = not supported</p> <p>3rd byte – A-B-A 1 = supported, 2 = supported but switched off, 0 = not supported</p> <p>4th byte – Archetypes 1 = supported, 2 = supported but switched off, 0 = not supported</p> <p>5th byte – SCR flags 1 = supported, 2 = supported but switched off, 0 = not supported</p> <p>6th byte – Paper Process 1 = supported, 2 = supported but switched off, 0 = not supported</p> <p>7th byte – Patient Facing Services 1 = supported, 2 = supported but switched off, 0 = not supported</p> <p>8th to 15th byte – spare = "0"</p>	15	
HR6	MI Time Period	<p>Date representing the time period for the MI record set in UTC format. One record set (header, data records and footer) to be sent every 24 hours.</p> <p>YYYY-MM-DD (e.g. 2010-03-27)</p> <p>The 24 hour day covered by the MI submission. In the example 2010-03-27 would cover 2010-03-27T0:00:00 to 2010-03-27T23:59:59.999.</p>	10	
HR7	Maximum Message Size	Decimal value in MB of Maximum Message Size before Large Messaging is required.	5	

Requesting system MI data recording - header				
#	Data Item	Data Description	Max Len	
HR8	Maximum Number of Attachments	Integer value of the Maximum Number of Attachments before Large Messaging is required.	4	
HR9	Maximum Attachment Size	Decimal value in MB of Maximum Attachment Size before Large Messaging is required.	5	
HR10	Configuration A	Decimal value for Large Messaging configuration known as A.	4	
HR11	Configuration B	Decimal value for Large Messaging configuration known as B.	4	

3.2 Registrations and requests

The requesting system record set consists a set of records for each registration made (this also allows identification of registrations that never made it as far as a GP2GP transfer). Within the records for each registration, there are a number of blocks of data items:

The conversation details,

Registration details – includes identifying whether and what NHS Smartcard User UID was used in the registration.

Request and request failure point details – provides details of the failure point in the process, recording the message ID and/or errors identified. This block of data records an identified step in the process and the details of the failure. Steps can be added or removed without the need to change the structure of the MI message, all steps executed successfully are not recorded but are implicit. If all steps are successful but non-fatal errors were encountered, the first non-fatal error is recorded. For example a failure of TMS to accept a message on the first attempt will be recorded with the relevant error details and a number of retries, provided a fatal error does not occur later in the process. Any subsequent non-fatal errors will be lost.

EHR receipt details – includes the message ID and time of EHR receipt

EHR acknowledgement details – details the acknowledgement returned to the sender and any errors incurred.

Large messaging details – because Large Messaging is logically the responsibility of the messaging layers, the Management Information is minimised. However, it is important to be able to monitor the success of its implementation, reasons why its use is being triggered and limited failure information.

The following subsections detail the data requirements for MI collected from the application when it is in the role of *Requester*.

3.2.1 Registrations and requests MI records

The following data is to be provided by the requesting system as comma separated fields (CSV) within carriage returned records. These are located between the header and footer. If no permanent registrations are made and no EHR Requests received, then the footer will follow the header with no intervening records.

The sorting or ordering of the "RR" and "SR" record types is unimportant, but the records must correspond to conversations started or continued within the MI time period defined in the header record.

Requesting system MI data recording - body				
#	Data Item	Data Description	Max Len	
Conversation Details				
RR1	Record Type	"RR"	1	
RR2	Conversation ID	Conversation Id NB Leave blank if Request not sent.	36	
RR3	Requesting ODS	ODS of the GP Practice making this request (this is a duplicate of HR2 to make processing simpler)	10	
RR4	Target (Sending) ODS	ODS of the GP Practice to which the message is sent	10	
Registration Details				
RR5	Patient registration	Date Time in UTC format (no time zone required) YYYY-MM-DDThh:mm:ss (e.g. 2010-03-27T13:05:21) As a minimum a record should be created and this field completed for every registration regardless of whether GP2GP is enabled or utilised for this patient.	19	
RR6	Registration type	Values: 0 = undetermined, 1 = New, 2 = Returning, 3 = Internal Mandatory for every registration. The local practice list of past and present patients is used to determine whether a patient is New or Returning. For New, the patient is not in local list. For Returning the patient is in local list but is not a currently registered patient. For Internal, the new and old (current) practices share a single patient database.	1	

Requesting system MI data recording - body				
#	Data Item	Data Description	Max Len	
RR7	User Identifier for Registration	Values: Smartcard UUID (SDS UUID) OR if that is unavailable Local access user identifier prefixed with "L" Mandatory	16	
Request and Request Failure Point Details				
RR8	Process failure point	0 = No failure 10 = PDS trace 20 = PDS update 30 = SDS lookup Practice (not used) 40 = SDS lookup ASID 50 = SDS lookup Contract Props 60 = Send Request 70 = Manual Request Record for a fatal error. If no fatal errors, record for the first failure at a step, even if subsequent retries were successful.	2	
RR9	Failure point Date/time	Date Time in UTC format (no time zone required) YYYY-MM-DDThh:mm:ss (e.g. 2010-03-27T13:05:21) The logged date/time of the failure.	19	
RR10	ID of failed message	Message ID Null if no failure	36	

Requesting system MI data recording - body				
#	Data Item	Data Description	Max Len	
RR11	Failure type	<p>Use:</p> <p>0 = Attempted, 1 = Sent, 2 = Not Sent - Patient at current practice, 3 = Not Sent - Patient known at current practice transferring from non-GP2GP practice, 4 = Not Sent - Patient not known at current practice transferring from a non-GP2GP practice, 5 = Not Sent – Patient has no previous practice registered, 6 = Negative acknowledgement received.</p> <p>Null if no failure</p>	1	
RR12	Error code	<p>Error code from source application, TMS or returned from target application identified above.</p> <p>Use Null = No error.</p>	8	
RR13	"Error description"	<p>Error description from source application TMS or returned from target application identified above.</p> <p>Use Null = No error.</p> <p>Delimited with double quotes included in the maximum field length</p>	100 incl quot es	
RR14	Retries	<p>Number of retries, 0 = None</p> <p>Mandatory if the GP system is connected and registered with TMS and GP2GP enabled. Use Null if not.</p> <p>0 if no failure</p>	2	
RR15	EHR Request message ID	Message ID	36	

Requesting system MI data recording - body				
#	Data Item	Data Description	Max Len	
RR16	EHR Request sent date/time	Date Time in UTC format (no time zone required) YYYY-MM-DDThh:mm:ss (e.g. 2010-03-27T13:05:21) Use Null if not sent.	19	
EHR Extract Receipt Details				
RR17	EHR Extract receipt date/time	Date Time in UTC format (no time zone required) YYYY-MM-DDThh:mm:ss (e.g. 2010-03-27T13:05:21) Date/Time of EHR Extract or negative acknowledgment Use Null if not received.	19	
RR18	EHR Extract Message ID	Message ID of the EHR Extract or Core EHR message in a Large Messaging scenario.	36	
RR19	Reason for Large Message	0 = Not Large Message 1 = Core EHR alone exceeds the single message limit. 2 = A single attachment exceeds the single message limit. 3 = One or more attachment types, not supported by TMS. 4 = More than the maximum # attachments. 5 = Core EHR and attachment exceeds the single message limit For multiple reasons, report each applicable reason code (i.e. in an extract where there are 105 attachments, one attachment exceeds 5MB and it is an unsupported TMS MIME type, report reason "234". Reason "0" should never have further reasons).	6	
RR20	Total number of Large Message Common Point to Point fragments	Integer	3	

Requesting system MI data recording - body				
#	Data Item	Data Description	Max Len	
RR21	Total number of Large Message Common Point to Point fragments successfully received.	Integer Represents the number of Large Message Common Content fragments for which a positive acknowledgement was sent.	3	
EHR Extract Acknowledgement Details				
RR22	EHR Extract Acknowledgement	Null = (not used) 0 = Not Sent, 1 = Successfully integrated (ACK), 2 = Filing rejected (NACK), 3 = Duplicate Received (NACK), 4 = Not Requested (NACK) [Ref 2: Error 09], 5 = Filed as attachment (NACK), 6 = Failed to receive some Large Messages (NACK) – e.g. some Large Messages not received or failed to reconstitute, 7 = Filing failed (NACK) Use 0 for all conversations terminated with the response not being sent for all reasons (including sending practice not GP2GP enabled, Patient STOP coded, etc.).	1	
RR23	EHR Extract Acknowledgement detail sent	Null=Not acknowledged, 0 = ACK sent, 01 – 99 = NACK error code See GP2GP Error Response Codes	2	
RR24	EHR Extract Acknowledgement Date/time	Date Time in UTC format (no time zone required) YYYY-MM-DDThh:mm:ss (e.g. 2010-03-27T13:05:21) The logged date/time of the failure.	19	
RR25	EHR Extract Acknowledgement message ID	Message ID Use null if no message sent	36	
RR26	EHR Extract Acknowledgement Failure point Date/time	Date Time in UTC format (no time zone required) YYYY-MM-DDThh:mm:ss (e.g. 2010-03-27T13:05:21) The logged date/time of the failure.	19	

Requesting system MI data recording - body				
#	Data Item	Data Description	Max Len	
RR27	EHR Response Acknowledgement Failure type	Null = No failure Use: 1 = Source application or not sent, 2 = TMS	1	
RR28	EHR Response Acknowledgement error code	Error code from source application or TMS. Use Null if no errors.	8	
RR29	"EHR Response Acknowledgement error description"	Error code from source application or TMS. Use Null if no errors. Delimited with double quotes	100 incl quot es	
RR30	EHR Response Acknowledgement Retries	Values: 0 = None nn = Number of retries, Null if no qualifying message Incremented for each retry that the MHS has to make to get the message onto the TMS.	2	
RR31	User Identifier for EHR integration or rejection	Values: Smartcard UUID (SDS UUID) OR if that is unavailable Local access user identifier prefixed with "L" OR if the system performs the rejection "SYSTEM" Mandatory	16	

3.3 Responses to EHR Requests

The sending system record set consists of a set of records for each response made to a EHR Request. Within the records for each registration, there are a number of blocks of data items:

The conversation details.

EHR Request receipt and acknowledgement – includes details of the acknowledgement sent in response (note the positive Application Acknowledgement is removed from the compliance specification in V2.2 onward).

Construct and send the EHR Extract – includes the PDS lookup and the creation & despatch of the EHR Extract.

Close conversation – identifies that a positive final Application Acknowledgement was received by the Sending system. Errors and negative Application Acknowledgements would be recorded in the block above.

3.3.1 Responses to EHR Requests MI records

The following data is to be provided by the sending system as comma separated fields within carriage returned records. These are located between the header and footer. If no permanent registrations are made and no EHR Requests received, then the footer will follow the header with no intervening records.

The sorting or ordering of the “RR” and “SR” record types is unimportant, but the records must correspond to conversations started or continued within the MI time period defined in the header record.

Sending system MI data recording				
#	Data Item	Data Description	Max Len	Map to V2.2 Req't
Conversation Details				
SR1	Record Type	“SR”	2	
SR2	EHR Request ID	The GUID of the EHR Request message	36	
SR3	Conversation ID	Conversation Id. Null until assigned by generation of EHR Request	36	
SR4	Requesting ODS	ODS code of the Requesting practice	10	
SR5	Sending ODS	ODS of the GP Practice receiving this request (this is a duplicate of HR2 to make processing simpler)	10	
SR6	Requesting practice configuration	0000000000 = no special status 1 st byte = 1 – Supports Large Messaging 2 nd byte = 1 – Supports A-B-A 3 rd – 10 th byte = 0 (undefined) This is to check what the sending practice system understands about the configuration of the requesting practice system.	10	
EHR Request receipt & acknowledgement				
SR7	EHR Request receipt	Date Time in UTC format (no time zone required) YYYY-MM-DDThh:mm:ss (e.g. 2010-03-27T13:05:21) Date Time that the Request was received by the practice system	19	

SR8	EHR Request Acknowledgement date/time	Date Time in UTC format (no time zone required) YYYY-MM-DDThh:mm:ss (e.g. 2010-03-27T13:05:21) Use Null if not sent. Note that the positive acknowledgement is to be withdrawn as part of Compliance requirements 2.2a	19	
SR9	EHR Request Acknowledgement detail sent	Null=Not acknowledged, 0 = ACK sent, 01 – 99 = NACK error code See GP2GP Error Response Codes	2	
SR10	EHR Request Acknowledgement message ID	Message ID Use Null if not sent.	36	
SR11	EHR Request Acknowledgement Failure Type	Use: 1 = Source application or not sent, 2 = TMS	1	
SR12	EHR Request Acknowledgement error code	Error code from source application, TMS or returned from target application identified above. Use Null = No error.	10	
SR13	“EHR Request Acknowledgement error description”	Error description from source application TMS or returned from target application identified above. Use Null if no error. Delimited with double quotes.	100 incl quotes	
SR14	EHR Request Acknowledgement retries	Values: 0 = No retries, nn = Number of retries Null if no qualifying message Incremented for each retry that the MHS has to make to get the message onto the TMS.	2	
Construct and send the EHR Extract				

SR15	Process failure point	<p>Values:</p> <p>0 = No failure 10 = Patient look-up 20 = PDS comparison with Requestor 30 = SDS lookup ASID & Party Key 40 = SDS lookup Contract Props 50 = SDS lookup for Large Message support 60 = Send EHR 70 = Manually Send duplicate EHR</p> <p>Record for a fatal error. If no fatal errors, record for the first failure at a step, even if subsequent retries were successful.</p>	2	
SR16	Failure point Date/time	<p>Date Time in UTC format (no time zone required)</p> <p>YYYY-MM-DDThh:mm:ss</p> <p>(e.g. 2010-03-27T13:05:21)</p> <p>The logged date/time of the failure.</p>	19	
SR17	ID of failed message	<p>Message ID of the message sent to PDS or EHR.</p> <p>Null if no failure</p>	36	
SR18	Failure type	<p>Values:</p> <p>1 = Source application or not sent, 2 = TMS, 3 = Target application.</p> <p>Except in the following circumstances:</p> <p>For Process failure point 60 or 70: Set Request:</p> <p>1 = Not Sent – Failed to successfully generate EHR message, 2 = Not Sent – Large message and no LM support (may also be TMS error details in subsequent fields). 3 = Not Sent – Other source software problem, 4 = TMS</p> <p>Null if no failure</p>	1	
SR19	Error code	<p>Error code from source application, TMS or returned from target application identified above.</p> <p>Use Null = No error.</p>	10	

SR20	"Error description"	Error description from source application TMS or returned from target application identified above. Use Null = No error. Delimited with double quotes.	100 incl quot es	
SR21	Retries	Values: 0 = No retries, nn = Number of retries Null if no qualifying message Incremented for each retry that the MHS has to make to get the message onto the TMS.	2	
SR22	EHR Extract message ID	Message ID	36	
SR23	EHR Extract sent date/time	Date Time in UTC format (no time zone required) YYYY-MM-DDThh:mm:ss (e.g. 2010-03-27T13:05:21) Use Null if not sent.	19	
SR24	Large Messaging	0=Not necessary, 1=Required Use "1" if TMS rejects the message for being too large or having too many attachments OR if the supplier calculates that the message exceeds limitations for TMS (without using large messaging)	1	
SR25	Total number of Large Message Common Point to Point fragments	Integer	3	
SR26	Total number of Large Message Common Point to Point fragments successfully accepted by TMS	Integer This represents the number of messages successfully sent onto, and acknowledged by TMS at ebXML level.	3	
SR27	Total number of Large Message Common Point to Point fragments positively acknowledged recipient	Integer This represents the number of common content messages that the sender knows were successfully received by the recipient and positive Application Acknowledgements were received.	3	
Close conversation				

SR28	Sender conversation closed date/time	Date Time in UTC format (no time zone required) YYYY-MM-DDThh:mm:ss (e.g. 2010-03-27T13:05:21) Date / Time that the conversation was closed by receipt of a positive ACK from the Requester. Use Null if conversation still open or NACK received. NACK Details recorded in previous failure point fields.	19	
------	--------------------------------------	--	----	--

3.3.2 Footer records

Footer for MI file is detailed below. This footer is **always** sent, even if there are no permanent registrations made or received EHR requests. The footer contains a count of each of the “RR” and “SR” record types for validation purposes.

Requesting system MI data recording				
#	Data Item	Data Description	Max Len	Map to V2.2 Req't
FS1	Record Type	“FR”	2	
FS2	Number of RR records	Integer e.g. 9999 The count of “RR” records in the body of the message without preceding zeros. 0 if no records.	7	
FS3	Number of SR records	Integer e.g. 9999 The count of “SR” records in the body of the message without preceding zeros. 0 if no records.	7	
FS4	Practice ODS	ODS of the GP Practice that created the report	10	

Requesting system MI data recording				
#	Data Item	Data Description	Max Len	Map to V2.2 Req't
FS5	MI Time Period	<p>Date representing the time period for the MI record set in UTC format. One record set (header, data records and footer) to be sent every 24 hours.</p> <p>YYYY-MM-DD (e.g. 2010-03-27)</p> <p>The 24 hour day covered by the MI submission. In the example 2010-03-27 would cover 2010-03-27T0:00:00 to 2010-03-27T23:59:999.</p> <p>This is a duplicate of HR6 for ease of processing.</p>	10	

3.4 Example records

The following example records indicate the expectation for information sent to the Authority. Angular braces indicate that appropriate data should be inserted.

3.4.1 Header

```
HR,A81010,4297447031,"IN PRACTICE SYSTEMS LTD_Vision 3_DLM
259",1000000000000000,2010-03-27,5.0,100,5.0,1.0,1.0
```

3.4.2 Footer

```
FR,5,2,A81010,2010-03-27
```

3.4.3 Role = Requesting practice

The following example records are for the Requesting practice role.

3.4.3.1 Failure to trigger GP2GP because no NHS Smartcard used (no spine connectivity)

```
RR,,D81008,A81010,2010-03-27T13:14:24,1,
L123456789012,10,10,2010-03-27T13:14:24,1,,,,,,,,,,,,,
```

Note: This assumes that spine connection was attempted. If the software does not attempt a Spine connection under these circumstances, the fields 8 – 13 will be null.

3.4.3.2 SDS failure

```
RR,,D81008,A81010,2010-08-24T13:14:24,1,1234567890,20,2010-08-
24T13:15:24,58E88CD9-0565-4BA2-8BD0-463D6209CCBE,3,<SDS error
code>,<SDS error description>,0,,,,,,,,,,,,,
```

3.4.3.3 Failed to send request to Spine

```
RR,C2ACE0E0-D575-4272-BD27-0FF081C37440,D81008,A81010,2010-08-
24T13:14:24,1,1234567890,20,2010-08-24T13:15:24,58E88CD9-0565-
4BA2-8BD0-463D6209CCBE,2,<TMS error code>,<TMS error
description>,3,,,,,,,,,,,,,
```

3.4.3.4 NACK returned from sending practice

```
RR,C2ACE0E0-D575-4272-BD27-0FF081C37440,D81008,A81010,2010-08-
24T13:14:24,1,1234567890,60,2010-08-24T13:22:07,58E88CD9-0565-
4BA2-8BD0-463D6244DF56,3,6,"Patient not at surgery",0,58E88CD9-
0565-4BA2-8BD0-463D34053B8E,2010-08-24T13:15:24,,,,,,,,,,,,,
```

3.4.3.5 Success

```
RR,C2ACE0E0-D575-4272-BD27-0FF081C37440,D81008,A81010,2010-08-
24T13:14:24,1,1234567890,,,,,,,,,58E88CD9-0565-4BA2-8BD0-
463D6244DF56,2010-08-24T13:15:24,2010-08-24T13:23:34,58E88CD9-
0565-4BA2-8BD0-463D63249234,0,1,2010-08-25T09:01:22,58E88CD9-
0565-4BA2-8BD0-463D34053B8E,,,,,0,,,,,
```

3.4.4 Role = Sending practice

The following example records are for the Sending practice role.

3.4.4.1 NACK returned from sending practice

```
SR,C2ACE0E0-D575-4272-BD27-0FF081C37440,B2ACE0E0-D575-4272-
BD27-0FF081C37440,A81010,D81008,1000000000,2010-08-
24T13:14:27,2010-08-24T13:21:54,06,58E88CD9-0565-4BA2-8BD0-
463D6209CCBE,1,06,"Patient not at surgery",0,,,,,,,,,,,,,
```

3.4.4.2 Success

(Note: Final date closes the conversation and ACK details not recorded).

```
SR,C2ACE0E0-D575-4272-BD27-0FF081C37441,B2ACE0E0-D575-4272-
BD27-0FF081C37441,A81010,D81008,1000000000,2010-08-
24T13:14:27,2010-08-24T13:21:54,0,58E88CD9-0565-4BA2-8BD0-
463D6209CCBF,,,,,0,0,,,,,,,,,58E88CD9-0565-4BA2-1234-
463D6209CCBE,2010-08-24T13:23:25,0,0,0,2010-08-25T09:01:32,
```

3.5 Volumetrics

The following section is provided for information only to the GP system suppliers. It will be used to calculate volumetrics for the DTS service and the storage and processing capabilities of the Management Information analysing system.

3.5.1 Message Volumes

Investigations show that there are between 280,000 and 400,000 monthly registrations with GPs from within the patient community, so in a 100% GP2GP world, these are the numbers of conversations that would be considered. Each conversation would be in two parts, one part from the Requester and one from the Sender.

3.5.2 Record size & Volumes

The table below shows the total monthly messages and data volumes by supplier. There are the following assumptions;

- There are 8389 practices in England (at the time of writing).
- This assumes 100% GP2GP transfer.
- The volumes are built up from simple byte counts of the field sizes within the message.
- Request Record = 542 bytes
- Send Record = 499 bytes

- There is a redundancy in the message of 5% in the header, 25% in records and 1% in the footer. This accounts for fields being null or below their maximum number of characters.
- The format of the message is a CSV file with a header and footer together with 2 body record types as described in subsequent sections.
- No compression or hashing has been accounted for.
- The model makes an assumption about the suppliers' use of hosted services and practice based local application instances. The proportion of messages is allocated accordingly
- The model makes an assumption about the number of hops the message will take to get from the source to the Authority.

Capacity model for GP2GP usage of DTS for Management Information								
# Practices in England		8389						
Management Information Transaction Volumes	Estimated 2013 # Transfers	eMIS (Kbytes)	InPS (Kbytes)	TPP (Kbytes)	iSoft (Kbytes)	Micro Test (Kbytes)	Estimated Volume of MI data across DTS (Mbytes)	
	Hop		2	1	1	2	1	
..Jan	307001	307307	51983	33956	39462	5638	428.07	
..Feb	272767	275933	46844	30170	35676	5097	384.49	
..Mar	296644	297815	50428	32811	38317	5474	414.89	
..Apr	294249	295620	50069	32546	38052	5436	411.84	
..May	257283	261743	44520	28457	33963	4852	364.78	
..Jun	329228	327677	55319	36415	41921	5989	456.37	
..Jul	365332	360764	60739	40408	45914	6560	502.33	
..Aug	298080	299131	50644	32970	38476	5497	416.72	
..Sep	440404	429563	72008	48712	54218	7746	597.90	
..Oct	396085	388947	65355	43810	49316	7046	541.48	
..Nov	320148	319355	53956	35411	40917	5846	444.81	
..Dec	250361	255399	43481	27692	33198	4743	355.97	
Maxima	440404	429563	72008	48712	54218	7746	598	
Totals	3827582	3819254	645346	423358	489430	69924	5320	
Averages	318965	318271	53779	35280	40786	5827	443	

3.5.3 Data Storage

Using the information above, the Authority will receive < 5.5 GBytes of byte level data per year if GP2GP is used for 100% of transfers. The figure in the above table provides volumes across the DTS channel and proportionally increases the volumes according to the number of hops. A separate model that does not include this factor is the subject of a separate Supplementary Specification [Ref: 2].