**ORU\_ViewPoint\_PDF\_to Cerner**

**Version 1.1**

**Prepared By Rich Allison**

**Date: 3/20/2019**

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# **Document Control**

## Resources

|  |  |  |
| --- | --- | --- |
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## Project Distribution List

## Document Version Control

|  |  |  |  |
| --- | --- | --- | --- |
| **Version** | **Date** | **Modifier** | **Description** |
| V1.0 | 2/11/2019 | Rich Allison | Originally Created for PDF to Cerner |
| V1.1 | 3/20/19 | Charles (CJ) Markwardt | Adding the FSI parts to the functional requirements |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

# 1. Introduction

## 1.1 Purpose

The purpose of this document is to outline the Results interface requirements from ViewPoint PDF to Cerner.

## 1.2 Project Scope

Integration for this application includes, Orders Interface (ORM) from the RIS to Cerner ViewPoint PDF

## 1.3 Terminology Standards

### 1.3.1 Acronyms

**ORU –** Unsolicited Result

### 1.3.2 Glossary

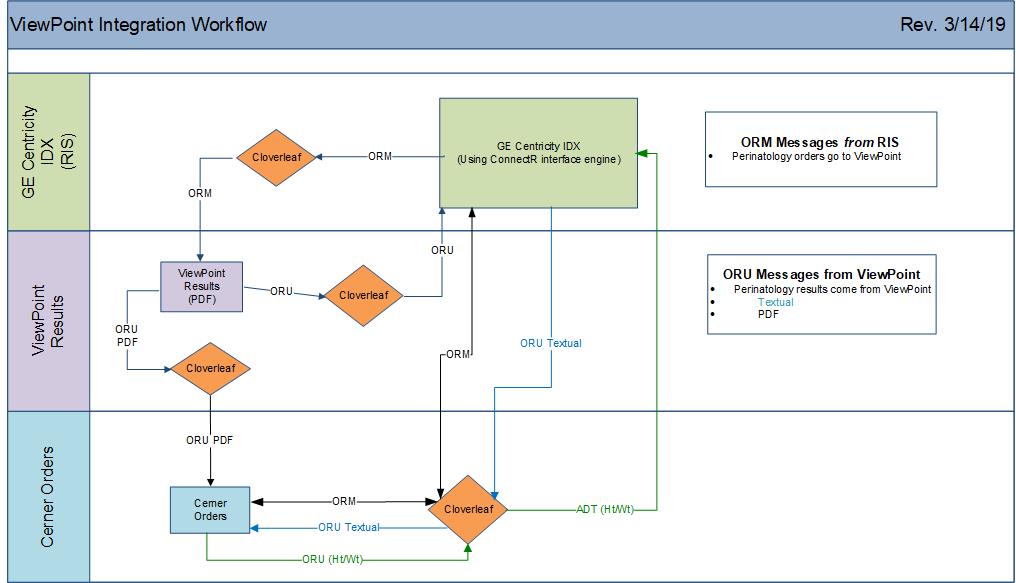
**GE Healthcare** is the vendor name.

**Viewpoint** is the application.

## 1.4 Document References

# 2*.* Diagram

Provide a solution diagram that depicts the integration of components specified in this IDBB. This diagram must include the data flow for the interfaces (source and target).



# 3. Requirements

## 3.1 Functional Requirements

Provide detail for the below functional requirements. The message transformation requirements for the components defined in this specification should be specified in section 4.2 of this document.

|  |  |  |
| --- | --- | --- |
| **Cerner** |  |  |
| **Number** | **Requirement Name** | **Requirement Description** |
| FR.2019.3.20 | New Contributor System VPOINT | The VPOINT contributor system was created to support PDF documents coming from Viewpoint.  Organization - Baycare Heatlh Systems  Contributor Source – VPOINT  Alt Contributor Source – Invision  Contributor System Type – Unauth  Message Format – HL7 Standard V2x  Max File Size = 20MB  **Special Configuration**  MSH.5 must = POSTIMAGE if the OBX segments as an attachment in PowerChart  **Patient Matching**  PID.3.5 must = BCCPI  **Encounter Matching**  PID.18.5 must = BCFN  **Order Matching**  The order id in the OBR.2 must match an existing order id in Cerner |

## 3.2 Non-Functional Requirements

Provide concise detail for the below non-functional requirements. The below requirements must be evaluated for every project.

|  |  |  |
| --- | --- | --- |
| **Cloverleaf** |  |  |
| **Number** | **Requirement Name** | **Requirement Description** |
| NFR.20XX.1.0 | Click here to enter text. | Click here to enter text. |

## 3.3 Messaging Protocols

Below are listed the details for the messaging protocols that will be leveraged for this integration. Please see the reference document located on the Integration SharePoint server: <insert link to document here>

### 3.3.1 Inbound to the BayCare Cloverleaf from Cerner

* TCP IP MLLP Encapsulated

### 3.3.2 Outbound to the BayCare Cloverleaf

* Outbound from viewpoint

### 3.3.3 Inbound to the Cerner

* Port: 13210
* ComServer Name: ORU\_TCP\_VPOINT\_IN

# 4. HL7 Messaging

## 4.1 Messaging Format

### 4.1.1 Segments

The segments utilized for this interface are:

MSH

PID

ORC

OBR

OBX

*Message Construction Notes:*

*[Square Brackets] – Optional*

*{Curly Brackets} – Repeatable*

*MSH – Message Header*

*PID – Patient ID Segment*

*ORC – Common Order Segment*

*OBR – Observation Request Segment*

*OBX – Observation Result*

### 4.1*.*2 Messaging Event Types

Below are the messages types necessary for this integration

|  |  |
| --- | --- |
| **Event Type** | **Description** |
| ORU^O01 | Result message |
|  |  |
|  |  |
|  |  |

### 4.1*.*3 Cloverleaf Configuration Files

For each HL7 interface specified in Section 2 of this document, identify the Cloverleaf Configuration Files: Variants, TCL Scripts, Xlates, Filters, etc.

**RIS Orders:**

Variants HL7 2.3 sms ORU\_O01

TCL Scripts: None

Xlates - view\_idxrad\_oru\_pdf

### 4.1.4 Cloverleaf Site Location

**imaging\_12 site**

## 4.2 Data Transformation Requirements View sults

| **Field Description** | **HL7 Field Loc.** | **Required Y/N** | **Data Type** | **Length** | **Notes** |
| --- | --- | --- | --- | --- | --- |
| Message Header | MSH |  |  |  | Pathcopy MSH |
| Sending Application | MSH.3 |  |  |  | Copy PV1-3.3 |
| Sending Facility | MSH.4 |  |  |  | Copy PV1-3.3 |
| Receiving Application | MSH.5 |  |  |  | =GE |
| Receiving Facility | MSH.6 |  |  |  | =IMAGECAST |
| Date/time of message | MSH.7 |  |  |  | Copy |
| Set ID | PID.1 |  |  |  | =1 |
| Patient Internal ID | PID.2 |  |  |  | Copy |
| Patient Identifier List | PID.3 |  |  |  | Copy from PID.19 |
| Patient Identifier List- type | PID3.6 |  |  |  | =MRN |
| Patient Name | PID.5 |  |  |  | Components: <family name>^<given name>^  Displayed in Orchestrate as Patient First name and Patient Last Name |
| Gender | PID.7 |  |  |  | Date/time of birth |
| Patient Account number | PID.18 |  |  |  | Copy |
| Common Order Segment | ORC |  |  |  | Pathcopy ORC |
| Placer Order Number | ORC.2 |  |  |  | Copy from OBR-2 |
| Placer Order Number | ORC.3 |  |  |  | Copy from OBR-3 |
| Order Control Reason | ORC.16 |  |  |  | Copy from ORC-13 (enterers location) |
| Placer Order Number | OBR.2.0 |  |  |  | Copy |
| Filler Order Number | OBR.3 |  |  |  | Copy |
| Universal Service ID ID | OBR.4.0 |  |  |  | Copy |
| Universal Service ID text | OBR.4.1 |  |  |  | Null out |
| Observation date | OBR.7 |  |  |  | Copy – trim to 12 characters |
| Specimen received date | OBR.14 |  |  |  | Copy |
| Results rpt/status chg | OBR.22 |  |  |  | Copy – trim to 12 characters |
| Results Status | OBR.25 |  |  |  | Copy |
| Principal result Interpreter | OBR.32 |  |  |  | Copy from OBR-33.5 |
| Assistant l result Interpreter | OBR.33 |  |  |  | Copy from OBR-33.5 |
| Set ID | OBX.1 |  |  |  | Copy |
| Value Type | OBX.2 |  |  |  | Copy |
| Observation identifier | OBX.3 |  |  |  | =REPORTTEXT |
| Observation Value | OBX.5 |  |  |  | Concatenate all OBX-5 fields |
| Observation Result Status | OBX.11 |  |  |  | Copy from OBR-25  If = C change to A |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

## 4.3 Sample Message

**ORU from Viewpoint**

MSH|^~\&|GE|ViewPoint|Outbound ORU Text||20180322134635||ORU^R01|63|P|2.4|||AL|NE||8859/15

PID||D13411-18-03-22-3|||VIEWPOINT^SJHW|||F

PV1||O|ULTWH^ULTRASOUND^BCSJWH||||||||||||||||6000037240|||||||||||||||||||||||||20180322130000

ZED|169^U\_SecondTrimesterUltrasound\_0^2nd / 3rd Trim Basic^2nd / 3rd Trim Basic|new\_1^admin^BCVIEWPTTST03^20180322134306~Scan\_started^admin^BCVIEWPTTST03^20180322134307~Report\_finalized^admin^BCVIEWPTTST03^20180322134635|29001986|62^Obstetrics||LP^Sonographer~admin^Reading physician|admin|||29001986|1.2.276.0.26.1.1.1.2.2018.115.66811.7372794

ORC|CN|29001986^^29001986|169|||||||||MS006716^Beattie^Martin||(813) 757-8421||Fetal anatomy survey

OBR|1|29001986|169|UAMNIOPN^US AMNIOCENTESIS PERINATOLOGY^^RIS^2nd / 3rd Trim Basic|||20180322133331||||||testing|||MS006716^Beattie^Martin|(813) 757-8421|||||20180322134635|||F||||||^Fetal anatomy survey||admin^Reading physician|LP^Sonographer|||||||||||||U\_SecondTrimesterUltrasound\_0^2nd / 3rd Trim Basic ^^^2nd / 3rd Trim Basic

OBX|1|ST|Indication^Indication^Exam indication||Indication\.br\========\.br\\.br\Fetal anatomy survey\.br\|||||||||20180322133331

OBX|2|ST|ImagingMethod^Method^Method||Method\.br\======\.br\\.br\Transabdominal ultrasound examination, Voluson E8 Expert. View: Limitations to fetal imaging: fetal position\.br\|||||||||20180322133331

OBX|3|ST|Dating^Dating^Dating||Dating\.br\======\.br\\.br\ Date Details Gest. age EDD\.br\LMP 10/24/2017 21 w + 2 d 7/31/2018\.br\Conception Conception: IVF\.br\Assigned dating Dating performed on 03/22/2018, based on the LMP 21 w + 2 d 7/31/2018\.br\|||||||||20180322133331

OBX|4|ST|TypeofPregnancy^Pregnancy^Pregnancy||Pregnancy\.br\=========\.br\\.br\Singleton pregnancy. Number of fetuses: 1.\.br\|||||||||20180322133331

OBX|5|ST|FetalAnatomyAIUM^Fetal Anatomy^Fetal Anatomy with basic scan structures on the top level (not for FR and IT)||Fetal Anatomy\.br\===========\.br\\.br\The following structures appear normal:\.br\Head / Neck Cranium. Lateral ventricles. Choroid plexus. Midline falx. Cavum septi pellucidi. Cerebellum. Cisterna magna.\.br\Face Lips. Profile. Nose.\.br\Heart / Thorax 4-chamber view. RVOT view. LVOT view.\.br\Abdomen Cord insertion. Stomach. Kidneys. Bladder.\.br\Spine Cervical spine. Thoracic spine. Lumbar spine. Sacral spine.\.br\Extremities / Skeleton Arms. Legs.\.br\\.br\Gender: male.\.br\|||||||||20180322133331

OBX|6|ST|FetalGrowthOverviewMain^Fetal Growth Overview^Fetal Growth Overview||Fetal Growth Overview\.br\=================\.br\\.br\Exam date GA BPD (mm) HC (mm) AC (mm) FL (mm) HL (mm) EFW (g)\.br\03/12/2018 33w 6d 75.0 <1% 300.0 7% 280.0 9% 65.0 31%\.br\|||||||||20180322133331

OBX|7|ST|GeneralEvaluation^General Evaluation^General Evaluation||General Evaluation\.br\==============\.br\\.br\Cardiac activity present.\.br\Fetal movements present.\.br\Presentation cephalic.\.br\Umbilical cord Cord vessels: 3 vessel cord. Cord insertion: placental insertion: normal.\.br\Amniotic fluid Amount of AF: Normal.\.br\|||||||||20180322133331

OBX|8|ST|MaternalStructuresMain^Maternal Structures^Maternal Structures||Maternal Structures\.br\===============\.br\\.br\Cervix Normal\.br\ Approach - Transabdominal\.br\Right Ovary Normal\.br\Left Ovary Normal\.br\Cul de Sac No free fluid visualized\.br\|||||||||20180322133331

OBX|9|ST|ReportSummaryImpression^Impression^Impression||Impression\.br\=========\.br\\.br\1. Single Intrauterine pregnancy at weeks gestation\.br\2. No evidence of a fetal structural abnormality with limitations to imaging as noted above..\.br\3. Normal amniotic fluid volume\.br\|||||||||20180322133331

**ORU to RIS**

MSH|^~\&|BCSJWH|BCSJWH|GE|IMAGECAST|201803221346||ORU^R01|63|P|2.4|||AL|NE||8859/1

PID|1|D13411-18-03-22-3|000000000^^^^^^MRN||VIEWPOINT^SJHW

ORC|CN|29001986^^29001986|169|||||||||MS006716^Beattie^Martin||(813) 757-8421||Fetal anatomy survey

OBR||29001986|169|UAMNIOPN|||201803221333|||||||||||||||201803221346

OBX||ST|REPORTTEXT||Indication\.br\========\.br\\.br\Fetal anatomy survey\.br\Indication\.br\========\.br\\.br\Fetal anatomy survey\.br\Method\.br\======\.br\\.br\Transabdominal ultrasound examination, Voluson E8 Expert. View: Limitations to fetal imaging: fetal position\.br\Dating\.br\======\.br\\.br\ Date Details Gest. age EDD\.br\LMP 10/24/2017 21 w + 2 d 7/31/2018\.br\Conception Conception: IVF\.br\Assigned dating Dating performed on 03/22/2018, based on the LMP 21 w + 2 d 7/31/2018\.br\Pregnancy\.br\=========\.br\\.br\Singleton pregnancy. Number of fetuses: 1.\.br\Fetal Anatomy\.br\===========\.br\\.br\The following structures appear normal:\.br\Head / Neck Cranium. Lateral ventricles. Choroid plexus. Midline falx. Cavum septi pellucidi. Cerebellum. Cisterna magna.\.br\Face Lips. Profile. Nose.\.br\Heart / Thorax 4-chamber view. RVOT view. LVOT view.\.br\Abdomen Cord insertion. Stomach. Kidneys. Bladder.\.br\Spine Cervical spine. Thoracic spine. Lumbar spine. Sacral spine.\.br\Extremities / Skeleton Arms. Legs.\.br\\.br\Gender: male.\.br\Fetal Growth Overview\.br\=================\.br\\.br\Exam date GA BPD (mm) HC (mm) AC (mm) FL (mm) HL (mm) EFW (g)\.br\03/12/2018 33w 6d 75.0 <1% 300.0 7% 280.0 9% 65.0 31%\.br\General Evaluation\.br\==============\.br\\.br\Cardiac activity present.\.br\Fetal movements present.\.br\Presentation cephalic.\.br\Umbilical cord Cord vessels: 3 vessel cord. Cord insertion: placental insertion: normal.\.br\Amniotic fluid Amount of AF: Normal.\.br\Maternal Structures\.br\===============\.br\\.br\Cervix Normal\.br\ Approach - Transabdominal\.br\Right Ovary Normal\.br\Left Ovary Normal\.br\Cul de Sac No free fluid visualized\.br\Impression\.br\=========\.br\\.br\1. Single Intrauterine pregnancy at weeks gestation\.br\2. No evidence of a fetal structural abnormality with limitations to imaging as noted above..\.br\3. Normal amniotic fluid volume\.br\||||||F

# 5. Alerts

Are you going to need alerting on this connection?

|  |  |
| --- | --- |
| Yes |  |
| No |  |

If the answer is yes, please complete the table below:

|  |  |  |  |
| --- | --- | --- | --- |
| **Site Name** | **Hours of Support** | **Distribution Group** | **Comments** |
|  |  |  |  |
| Imaging\_12 | 24/7 | IS Ancillary Applications Team |  |

# Appendix A: Risks and Concerns

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Project Name** |  |  | | |  |  |  |  |
| **Number** | **Risk / Concern** | **Comment** | **Mitigation** | | |  |  |  |
| RC.2013.1.0 |  |  | |  | |  |  |  |

# Appendix B: Issues List

This is a dynamic list of the open issues related to the IDBB that remain to be solved, including but not limited to TBDs, pending decisions, information needed, conflict awaiting resolution, and the like.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Project Name** |  |  | | |  |  |  |  |
| **Number** | **Issue** | **Comment** | **Fix** | | |  |  |  |
| I.2013.1.0 |  |  | |  | |  |  |  |

* End of document