

SecureFlow Pro™ HL7 Specifications ORM, ORU and ACK Message Types

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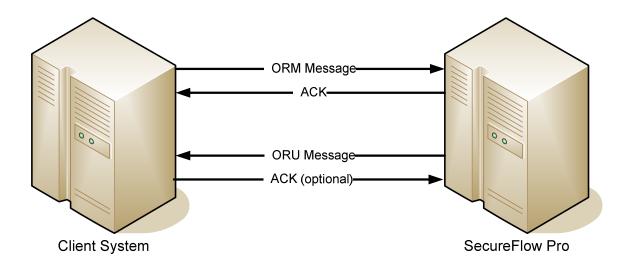
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Response Paradigms

The following response paradigms relate to the communication between external HL7 systems and the Remote Operations SecureFlow Pro™ system.

ORM messages are sent by the client system to the SecureFlow Pro system while ORU messages containing the finished transcriptions are sent back to the client system.



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Order Message (ORM)

ORM Event 01

The function of this message is to initiate the transmission of information about an order. This includes placing new orders, cancellation of existing orders, discontinuation, holding, etc. ORM messages can originate also with a placer, filler, or an interested third party.

The trigger event for this message is any change to an order. Such changes include submission of new orders, cancellations, updates, patient and nonpatient-specific orders, etc.

Remote Operations requires unsolicited updates that are triggered by the *Admit Patient* trigger event in most systems. The HL7 Order Message (ORM) should contain the following information.

Note: Segments must be terminated by 0x0D. This cannot change as specified by the HL7 specification.

Use Identifier	Description
0	Optional
R	Required
U	Unused

Pos	Element	Length	Use	Example
1	Field Separator	1	R	Pipe symbol -
2	Encoding Characters	4	R	^~\&
	Component	1	R	۸
	2. Repeat	1	R	~
	3. Escape	1	R	l l
	4. Subcomponent	1	R	&
3	Sending Application Name	180	R	EMRDirect
4	Sending Facility Name	180	R	NewCo
5	Receiving Application	180	U	
6	Receiving Facility	180	U	
7	Date and Time of Message	26	R	YYYYMMDDhhmmss
				20041231021425
8	Security	40	U	
9	Message Type	7	R	ORM01
	Message Type	3	R	ORM
	Trigger Event	3	R	01
10	Message Control Identifier	20	R	71200517353359
11	Processing ID	3	0	Defaults to Production
	 Processing Identifier 	1		P = Production
	2. Separator (^)	1		T = Training
	Processing Mode	1		D = Debugging
				A = Archive
				R = Restore from archive
				I = Initial load
				[empty] = Not present
12	HL7 Version	8	R	2.2, 2.3, etc.
				Must be 2.2 or later
13	Sequence Number	15	U	A non-null value in this field implies that

				the sequence number protocol is in use. This numeric field is incremented by one for each subsequent value.
14	Continuation Pointer	180	U	This field is used to define continuations in application-specific ways.
15	Accept Acknowledgement Type	2	U	AL = Always NE = Never ER = Erroneous conditions SU = Successfully completion
16	Application Acknowledgement Type	2	U	AL = Always NE = Never ER = Erroneous conditions SU = Successfully completion
17	Country Code	2	U	ISO 3166 provides a list of country codes
18	Character Set	6	U	Alternate character sets not used.
19	Principle Language of Message	60	U	ISO 639 provides a list of codes

Patient Identifier (PID) Segment

Pos	Element	Length	Use	Example
1	Set ID (Patient ID)	4	U	
2	Patient ID – External ID	20	R	123456
3	Patient ID – Internal ID	20	U	
4	Alternate Patient ID	20	U	
5	Patient Name 1. Last Name 2. First Name 3. Middle Initial 4. Suffix 5. Prefix	48	R	Smith^John^C^Rev^III
6	Mother's Maiden Name	48	U	
7	Date and Time of Birth	26	0	YYYYMMDDhhmmss 19730704063200
8	Sex	1	0	00111
9	Patient Alias 1. Last Name 2. First Name 3. Middle Initial 4. Suffix 5. Prefix	48	O	
10	Race	1	U	
11	Patient Address 1. Address Line 1 2. Address Line 2 3. City 4. State 5. Postal Code 6. Country	106	0	4708 Indian Paint^^Example^Texas^77777
12	County Code	12	U	
13	Phone Number – Home	40	U	NPANXXXXX
14	Phone Number – Business	40	U	NPANXXXXX
15	Primary Language	60	U	
16	Marital Status	1	U	

17	Religion	3	U	
18	Patient Account Number	20	R	ETH0809
19	Social Security Number	16	J	
20	Driver's License Number	25	U	
21	Mother's Identifier	21	U	
22	Ethnic Group	3	J	
23	Birth Place	60	U	
24	Multiple Birth Indicator	2	U	
25	Birth Order	2	J	
26	Citizenship	4	U	
27	Veteran's Military Status	60	U	
28	Nationality	80	U	
29	Patient Death and Time	26	U	
30	Patient Death Indicator	1	U	

Patient Visit 1 (PV1) Segment

Pos	Element	Length	Use	Example
1	Set ID PV1	4	U	
2	Patient Class	1	0	E = Emergency I = Inpatient O = Outpatient P = Preadmit R = Recurring Patient B = Obstetrics
3	Assigned Patient Location	80	U	
4	Admission Type	2	0	A = Accident E = Emergency L = Labor and Delivery R = Routine
5	Preadmit Number	20	0	
6	Prior Patient Location	80	U	
7	Attending Doctor 1. Last Name 2. First Name 3. Middle Initial	60	0	Smith^John^C
8	Referring Doctor 1. Last Name 2. First Name 3. Middle Initial	60	0	Smith^John^C
9	Consulting Doctor 1. Last Name 2. First Name 3. Middle Initial	60	0	Smith^John^C
10	Hospital Service	3	U	
11	Temporary Location	80	U	
12	Pre-admit Test Indicator	2	U	
13	Re-admission Indicator	2	U	
14	Admit Source	3	U	
15	Ambulatory Status	2	U	
16	VIP Indicator	2	U	

17	Admitting Depter	60	- 11	
	Admitting Doctor	60	U	
18	Patient Type	2	U	
19	Visit Number	20	U	
20	Financial Class	50	U	
21	Charge Price Indicator	2	U	
22	Courtesy Code	2	U	
23	Credit Rating	2	U	
24	Contract Code	2	U	
25	Contract Effective Date	8	U	
26	Contract Amount	12	U	
27	Contract Period	3	U	
28	Interest Code	2	U	
29	Transfer to Bad Debt Code	1	U	
30	Transfer to Bad Debt Date	8	U	
31	Bad Debt Agency Code	10	U	
32	Bad Debt Transfer Amount	12	U	
33	Bad Debt Recovery Amount	12	U	
34	Delete Account Indicator	1	U	
35	Delete Account Date	8	U	
36	Discharge Disposition	3	U	
37	Discharged to Location	25	U	
38	Diet Type	2	U	
39	Servicing Facility	2	U	
40	Bed Status	1	U	
41	Account Status	2	U	
42	Pending Location	80	U	
43	Prior Temporary Location	80	U	
44	Admit Date and Time	26	U	
45	Discharge Date and Time	26	U	
46	Current Patient Balance	12	U	
47	Total Charges	12	U	
48	Total Adjustments	12	U	
49	Total Payments	12	U	
50	Alternative Visit ID	20	U	
51	Visit Indicator	1	U	
52	Other Healthcare Provider	60	U	

Common Order (ORC) Segment

Pos	Element	Length	Use	Example
1	Order Control	2	0	NW
2	Placer Order Number	22	0	EX01369
3	Filler Order Number	22	U	
4	Placer Group Number	22	J	
5	Order Status	2	J	
6	Response Flag	1	U	
7	Quantity/Timing	200	J	
8	Parent	200	U	
9	Date and Time of Transaction	26	U	
10	Entered By	120	U	
11	Verified By	120	U	
12	Ordering Provider	120	U	
13	Enterer's Location	80	U	

14	Callback Phone Number	40	U	NPANXXXXXX
15	Order Effective Date and Time	26	U	
16	Order Control Code Reason	200	U	
17	Entering Organization	60	U	
18	Entering Device	60	U	
19	Action By	120	U	

Observation Request (OBR) Segment

Pos	Element	Length	Use	Example
1	Set ID	4	0	NW
2	Placer Order Number	75	R	EX01369
3	Filler Order Number	75	U	2707000
4	Universal Service ID	200	R	1299^CT abd/pelvis w/o contrast & 3d
_	Chiversal dervice 15	200	1	recon
5	Priority	2	U	
6	Requested Date and Time	26	Ū	
7	Observation Date and Time	26	Ū	
8	Observation End Date and	26	Ū	
	Time		· '	
9	Collection Volume	20	U	
10	Collector Identifier	60	U	
11	Specimen Action Code	1	U	
12	Danger Code	60	U	
13	Relevant Clinical Information	300	U	
14	Specimen Received Date and	26	U	
	Time			
15	Specimen Source	300	U	
16	Ordering Provider	80	U	
17	Order Callback Phone Number	40	U	
18	Placer Field 1	60	U	
19	Placer Field 2	60	U	
20	Filler Field 1	60	U	
21	Filler Field 2	60	U	
22	Results Report/Status Change	26	U	
	Date and Time			
23	Charge to Practice	40	U	
24	Diagnostic Service Section ID	10	U	
25	Result Status	1	U	
26	Parent Result	400	U	
27	Quantity / Timing	200	U	
28	Result Copies to	150	U	
29	Parent Made	150	U	
30 31	Transportation Mode	20	U	
	Reason for Study	300	U	
32 33	Principal Result Interpreter	200	U	
34	Assistant Result Interpreter Technician	200	U	
35	Transcriptionist	200	U	
36	Scheduled Date and Time	26	U	
37	Number of Sample Containers	4	U	
38	Transport Logistics of Collected	60	U	
30	Samples	00	U	
	Campies			

39	Collector's Comment	200	U	
40	Transport Arrangement	60	U	
	Responsibility			
41	Transport Arranged	30	U	
42	Escort Required	1	U	
43	Planned Patient Transport	200	U	
	Comment			

Example ORM Message

The following is an example ORM message.

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Acknowledgements (ACK) for ORM

The Remote Operations system sends acknowledgement (ACK) messages to all ORM messages. The structure of the ACK is as follows:

1 Field Separator 1 R Pipe symbol - 2 Encoding Characters 4 R A-\(^1\) Component 1 R R A-\(^1\) Component 1 R R A-\(^1\) Component 1 R R A-\(^1\) Separation Separation Name 180 R SFConnect 4 Sending Application Name 180 R SFConnect 4 Sending Facility Name 180 R Remote Operations, Inc. 5 Receiving Application 180 U Bour 180 U	Pos	Element	Length	Use	Example
2			4		
1. Component 1					
2. Repeat 3. Escape 4. Subcomponent 1 R & 3. Sending Application Name 180 R SFConnect 4 Sending Facility Name 180 U 6 Receiving Application 180 U 7 Date and Time of Message 26 R YYYYMMDDhhmmss 20030226000000 8 Security 40 U 9 Message Type 7 R ACK 10 Message Control Identifier 1 Processing ID 3 O Defaults to Production 1 Faraining 6 Processing Mode 1 Terraining 1 D Debugging 1 A Archive 1 Restore from archive 1 I Initial load 1 [empty] = Not present 1 R M Not Proced for the sequence number protocol is in use. 1 This numeric field is incremented by one for each subsequent value. 1 Continuation Pointer 1 Accept Acknowledgement Type 1 Application Acknowledgement 2 U AL = Always 1 AL = Always					
3. Escape 4. Subcomponent 1 R R 4. Subcomponent 1 R R 8. Sending Application Name 180 R Remote Operations, Inc. 5. Receiving Application 180 U 6. Receiving Facility 180 U 7. Date and Time of Message 26 R YYYYMMDDhhmmss 20030226000000 8. Security 40 U 9. Message Type 7 R ACK 10 Message Control Identifier 20 R 6162003124232500 11 Processing ID 4. Processing Identifier 5. Separator (^) 6. Processing Mode 1 Defaults to Production P = Production P = Production T = Training D = Debugging A = Archive R = Restore from archive I = Initial load [empty] = Not present 12 HL7 Version 8 R 2.2, 2.3, etc. Must be 2.2 or later 13 Sequence Number 15 U A non-null value in this field implies that the sequence number protocol is in use. This numeric field is incremented by one for each subsequent value. 14 Continuation Pointer 180 U This field is used to define continuations in application-specific ways. 15 Accept Acknowledgement Type 2 U AL = Always NE = Never ER = Erroneous conditions SU = Successfully completion 16 Application Acknowledgement 2 U AL = Always			1		
4. Subcomponent 1 R & Sending Application Name 180 R SFConnect 4. Sending Facility Name 180 R Remote Operations, Inc. 5. Receiving Application 180 U 6. Receiving Facility 180 U 7. Date and Time of Message 26 R YYYYMMDDhhmmss 20030226000000 8. Security 40 U 9. Message Type 7 R ACK 10. Message Control Identifier 20 R 6162003124232500 11. Processing ID 3 O Defaults to Production P = Production P = Production T = Training D = Debugging A = Archive R = Restore from archive I = Initial load [empty] = Not present 12. HL7 Version 8 R 2.2, 2.3, etc. Must be 2.2 or later 13. Sequence Number 15 U A non-null value in this field implies that the sequence number protocol is in use. This numeric field is incremented by one for each subsequent value. 14. Continuation Pointer 180 U This field is used to define continuations in application-specific ways. 15. Accept Acknowledgement Type 2 U AL = Always NE = Never ER = Erroneous conditions SU = Successfully completion		- P			
3 Sending Application Name 180 R Remote Operations, Inc. 5 Receiving Application 180 U 6 Receiving Facility 180 U 7 Date and Time of Message 26 R YYYYMMDDhhmmss 20030226000000 8 Security 40 U 9 Message Type 7 R ACK 10 Message Control Identifier 20 R 6162003124232500 11 Processing ID 3 O Defaults to Production Production Production Production Production Processing Mode 1 Frocessing Mode 1 Debugging Debugging Area Archive Researchive			_		
4 Sending Facility Name 180 R Remote Operations, Inc. 5 Receiving Application 180 U 6 Receiving Facility 180 U 7 Date and Time of Message 26 R YYYYMMDDhhmmss 20030226000000 8 Security 40 U 9 Message Type 7 R ACK 10 Message Control Identifier 20 R 6162003124232500 11 Processing ID 3 O Defaults to Production 1 Forcessing Identifier 1 P = Production 1 T = Training D = Debugging A = Archive R = Restore from archive I = Initial load [empty] = Not present 1 4 = Archive R = Restore from archive 1 = Initial load [empty] = Not present 1 4 = Archive A non-null value in this field implies that the sequence number protocol is in use. This numeric field is incremented by one for each subsequent value. 14 Continuation Pointer 180 U This field is used to define continuations in application-specific ways.	3		<u> </u>		
5 Receiving Application 180 U 6 Receiving Facility 180 U 7 Date and Time of Message 26 R YYYYMMDDhhmmss 20030226000000 8 Security 40 U 9 Message Type 7 R ACK 10 Message Control Identifier 20 R 6162003124232500 11 Processing ID 3 O Defaults to Production 4. Processing ID 1 T = Training D = Debugging A = Archive R = Restore from archive I = Initial load I = Initial load I = Initial load					
6 Receiving Facility 7 Date and Time of Message 26 R YYYYMMDDhhmmss 20030226000000 8 Security 9 Message Type 7 R ACK 10 Message Control Identifier 20 R 6162003124232500 11 Processing ID 3 O Defaults to Production P = Production T = Training D = Debugging A = Archive R = Restore from archive I = Initial load [empty] = Not present 12 HL7 Version 8 R 2.2, 2.3, etc. Must be 2.2 or later 13 Sequence Number 15 U A non-null value in this field implies that the sequence number protocol is in use. This numeric field is used to define continuations in application-specific ways. 15 Accept Acknowledgement Type 16 Application Acknowledgement 2 U AL = Always NE = Never ER = Erroneous conditions SU = Successfully completion 16 Application Acknowledgement 2 U AL = Always					remete operations, me.
7 Date and Time of Message 26 R YYYYMMDDhhmmss 20030226000000 8 Security 40 U 9 Message Type 7 R ACK 10 Message Control Identifier 20 R 6162003124232500 11 Processing ID 3 O Defaults to Production 4. Processing Identifier 1 P = Production 5. Separator (^) 1 T = Training D = Debugging A = Archive R = Restore from archive I = Initial load I = Initial					
8 Security 40 U 9 Message Type 7 R ACK 10 Message Control Identifier 20 R 6162003124232500 11 Processing ID 3 O Defaults to Production 4. Processing Identifier 1 T Training 6. Processing Mode 1 D Debugging A = Archive R = Restore from archive I = Initial load [empty] = Not present 12 HL7 Version 8 R 2.2, 2.3, etc. Must be 2.2 or later 13 Sequence Number 15 U A non-null value in this field implies that the sequence number protocol is in use. This numeric field is incremented by one for each subsequent value. 14 Continuation Pointer 180 U This field is used to define continuations in application-specific ways. 15 Accept Acknowledgement Type 2 U AL = Always NE = Never ER = Erroneous conditions SU = Successfully completion 16 Application Acknowledgement 2 U AL = Always					YYYYMMDDhhmmss
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9 Message Type 7 R ACK 10 Message Control Identifier 20 R 6162003124232500 11 Processing ID 3 O Defaults to Production P = Production T = Training D = Debugging A = Archive R = Restore from archive I = Initial load [empty] = Not present 12 HL7 Version 8 R 2.2, 2.3, etc. Must be 2.2 or later 13 Sequence Number 15 U A non-null value in this field implies that the sequence number protocol is in use. This numeric field is incremented by one for each subsequent value. 14 Continuation Pointer 180 U This field is used to define continuations in application-specific ways. 15 Accept Acknowledgement Type 2 U AL = Always NE = Never ER = Erroneous conditions SU = Successfully completion 16 Application Acknowledgement 2 U AL = Always	8	Security	40	U	
10 Message Control Identifier 20 R 6162003124232500 11 Processing ID 3 O Defaults to Production P = Production P = Production T = Training D = Debugging A = Archive R = Restore from archive I = Initial load [empty] = Not present 12 HL7 Version 8 R 2.2, 2.3, etc. Must be 2.2 or later 13 Sequence Number 15 U A non-null value in this field implies that the sequence number protocol is in use. This numeric field is incremented by one for each subsequent value. 14 Continuation Pointer 180 U This field is used to define continuations in application-specific ways. 15 Accept Acknowledgement Type 2 U AL = Always NE = Never ER = Erroneous conditions SU = Successfully completion					ACK
Processing ID					
4. Processing Identifier 5. Separator (^) 6. Processing Mode 1					
5. Separator (^) 6. Processing Mode 1					
6. Processing Mode 1		5. Separator (^)			
A = Archive R = Restore from archive I = Initial load [empty] = Not present 12 HL7 Version 8 R 2.2, 2.3, etc. Must be 2.2 or later 13 Sequence Number 15 U A non-null value in this field implies that the sequence number protocol is in use. This numeric field is incremented by one for each subsequent value. 14 Continuation Pointer 180 U This field is used to define continuations in application-specific ways. 15 Accept Acknowledgement Type 2 U AL = Always NE = Never ER = Erroneous conditions SU = Successfully completion 16 Application Acknowledgement 2 U AL = Always			1		
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for each subsequent value. 14 Continuation Pointer 180 U This field is used to define continuations in application-specific ways. 15 Accept Acknowledgement Type 2 U AL = Always NE = Never ER = Erroneous conditions SU = Successfully completion 16 Application Acknowledgement 2 U AL = Always					
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SU = Successfully completion 16 Application Acknowledgement 2 U AL = Always					
16 Application Acknowledgement 2 U AL = Always					
	16	Application Asknowledgement	2	11	
	10	Type		J	AL = Always NE = Never
ER = Erroneous conditions		Туре			
SU = Successfully completion					
17 Country Code 2 U ISO 3166 provides a list of country codes	17	Country Code	2	U	
18 Character Set 6 U Alternate character sets not used.					
	19	Principle Language of Message	60	U	ISO 639 provides a list of codes
	19	Frincipie Language of Message	00	U	130 039 provides a list of codes



Message Acknowledgement (MSA) Segment

Pos	Element	Length	Use	Example
1	Acknowledgement Code	2	R	AA = Success
				AE = Error
2	Message Control ID	20	R	20030226000000
3	Text Message	80	0	Success, or
				Failure
4	Expected Sequence Number	15	U	
5	Delayed Acknowledgement	1	U	
	Type			
6	Error Condition	100	0	

Example ACK Message

The following is an example success ACK message.

MSH|^~\&|SFConnect|Remote Operations, Inc.||| 20030226000000||ACK|6162003124232500|P|2.3||||||MSA|AA|20030226000000|Success||||

The following is an example failure ACK message.

MSH|^~\&|SFConnect|Remote Operations, Inc.||| 20030226000000||ACK|6162003124232500|P|2.3||||||MSA|AE|20030226000000||Failure||||



Observation Result Unsolicited (ORU) Messages

Remote Operations returns finished transcriptions to the client using Observation Result Unsolicited (ORU) messages that are triggered by the *Transcription Completion* event in the SecureFlow Pro system. The HL7 message will contain the following information.

Note: Segments must be terminated by 0x0D. This cannot change as specified by the HL7 specification.

Use Identifier	Description
0	Optional
R	Required
U	Unused

Pos	Element	Length	Use	Example
1	Field Separator	1	R	Pipe symbol -
2	Encoding Characters	4	R	^~\&
	5. Component	1	R	۸
	6. Repeat	1	R	~
	7. Escape	1	R	I
	8. Subcomponent	1	R	&
3	Sending Application Name	180	R	EMRDirect
4	Sending Facility Name	180	R	NewCo
5	Receiving Application	180	U	
6	Receiving Facility	180	U	
7	Date and Time of Message	26	R	YYYYMMDDhhmmss
				20041231021425
8	Security	40	U	
9	Message Type	7	R	ORM01
	Message Type	3	R	ORM
	4. Trigger Event	3	R	01
10	Message Control Identifier	20	R	71200517353359
11	Processing ID	3	0	Defaults to Production
	Processing Identifier	1		P = Production
	8. Separator (^)	1		T = Training
	Processing Mode	1		D = Debugging
				A = Archive
				R = Restore from archive
				I = Initial load
				[empty] = Not present
12	HL7 Version	8	R	2.2, 2.3, etc.
- 10				Must be 2.2 or later
13	Sequence Number	15	U	A non-null value in this field implies that
				the sequence number protocol is in use.
				This numeric field is incremented by one
4.4	Operitor ation Deleter	400		for each subsequent value.
14	Continuation Pointer	180	U	This field is used to define continuations
				in application-specific ways.

15	Accept Acknowledgement Type	2	U	AL = Always NE = Never ER = Erroneous conditions SU = Successfully completion
16	Application Acknowledgement Type	2	U	AL = Always NE = Never ER = Erroneous conditions SU = Successfully completion
17	Country Code	2	U	ISO 3166 provides a list of country codes
18	Character Set	6	U	Alternate character sets not used.
19	Principle Language of Message	60	U	ISO 639 provides a list of codes

Common Order (ORC) Segment

Pos	Element	Length	Use	Example
1	Order Control	2	0	RE = Observations to follow
2	Placer Order Number	22	R	EX00569
3	Filler Order Number	22	R	EX00569
4	Placer Group Number	22	U	
5	Order Status	2	U	
6	Response Flag	1	U	
7	Quantity/Timing	200	U	
8	Parent	200	U	
9	Date and Time of Transaction	26	U	
10	Entered By	120	U	
11	Verified By	120	U	
12	Ordering Provider	120	U	
13	Enterer's Location	80	U	
14	Callback Phone Number	40	U	NPANXXXXXX
15	Order Effective Date and Time	26	U	
16	Order Control Code Reason	200	U	
17	Entering Organization	60	U	
18	Entering Device	60	U	
19	Action By	120	C	

Observation Request (OBR) Segment

Pos	Element	Length	Use	Example
1	Set ID	4	R	1
2	Placer Order Number	75	R	EX00569
3	Filler Order Number	75	R	EX00569
4	Universal Service ID	200	U	
5	Priority	2	U	
6	Requested Date and Time	26	J	
7	Observation Date and Time	26	J	
8	Observation End Date and	26	U	
	Time			
9	Collection Volume	20	U	
10	Collector Identifier	60	J	
11	Specimen Action Code	1	U	
12	Danger Code	60	U	
13	Relevant Clinical Information	300	U	
14	Specimen Received Date and Time	26	U	

15	Specimen Source	300	U	
16	Ordering Provider	80	U	
17	Order Callback Phone Number	40	U	
18	Placer Field 1	60	U	
19	Placer Field 2	60	U	
20	Filler Field 1	60	U	
21	Filler Field 2	60	U	
22	Results Report/Status Change Date and Time	26	U	
23	Charge to Practice	40	U	
24	Diagnostic Service Section ID	10	U	
25	Result Status	1	U	
26	Parent Result	400	U	
27	Quantity / Timing	200	U	
28	Result Copies to	150	U	
29	Parent	150	U	
30	Transportation Mode	20	U	
31	Reason for Study	300	U	
32	Principal Result Interpreter	200	U	
33	Assistant Result Interpreter	200	U	
34	Technician	200	U	
35	Transcriptionist	200	U	
36	Scheduled Date and Time	26	U	
37	Number of Sample Containers	4	U	
38	Transport Logistics of Collected Samples	60	U	
39	Collector's Comment	200	U	
40	Transport Arrangement Responsibility	60	U	
41	Transport Arranged	30	U	
42	Escort Required	1	U	
43	Planned Patient Transport Comment	200	U	

Observation Result (OBX) Segment

Pos	Element	Length	Use	Example
1	Set ID (OBX)	10	R	1, 2, 3,
2	Value Type	2	R	AD = Address DT Date ED Encapsulated Data FT Formatted Text (Display) ST String Data. TM Time TN Telephone Number TS Time Stamp (Date & Time) TX Text Data (Display)
3	Observation Identifier	590	R	EX00569
4	Observation Sub-ID	20	U	
5	Observation Value	65536	0	Report section text.
6	Units	60	U	
7	References Range	10	U	
8	Abnormal Flags	5	U	
9	Probability	5	J	

10	Nature of Abnormal Test	2	U	
11	Observation Result Status	2	U	
12	Date of Last Observation Normal Values	26	U	
13	User-Defined Access Checks	20	- 11	
			D	
14	Date and Time of the Observation	26	R	
15	Producer's ID	60	U	
16	Responsible Observer	80	U	
17	Observation Method	60	U	

Example ORU Message

The following is an example ORU message.

```
MSH|^~\&|SFConnect|Remote Operations, Inc.|ETH
PACS||20030427000000||ORU^R01|20030427000000|P|2.3||||| PID|||||||||||||||||||||
ORC|RE|EX00569|EX00569|||||||||||
OBX|1|TX|EX00569|1|PROCEDURE DATE:||||||||200304270000|||
OBX|2|TX|EX00569|1|04/20/05||||||||200304270000|||
OBX|3|TX|EX00569|1|||||||||200304270000||| OBX|4|TX|EX00569|1|EXAM
NUMBER:||||||||200304270000||| OBX|5|TX|EX00569|1|EX00569|||||||||200304270000|||
OBX|6|TX|EX00569|1|||||||||200304270000||| OBX|7|TX|EX00569|1|PATIENT
NAME:||||||||200304270000||| OBX|8|TX|EX00569|1|John Smith||||||||200304270000|||
OBX|9|TX|EX00569|1||||||||200304270000|||
OBX|10|TX|EX00569|1|HISTORY:|||||||||200304270000||| OBX|11|TX|EX00569|1|1. Rectal
bleeding.||||||||200304270000||| OBX|12|TX|EX00569|1|2. History of colon
cancer.|||||||||200304270000||| OBX|13|TX|EX00569|1|||||||||200304270000|||
OBX|14|TX|EX00569|1|PROCEDURE:|||||||||200304270000||| OBX|15|TX|EX00569|1|CT of the
abdomen and pelvis with and without contrast.|||||||200304270000|||
OBX|16|TX|EX00569|1||||||||200304270000|||
OBX|17|TX|EX00569|1|COMPARISON:|||||||||200304270000||| OBX|18|TX|EX00569|1|No
comparisons are available.||||||||200304270000||| OBX|19|TX|EX00569|1||||||||200304270000|||
OBX|20|TX|EX00569|1|PROTOCOL:|||||||||200304270000||| OBX|21|TX|EX00569|1|Contiguous 5-
mm axial images are obtained through the abdomen and lung bases, through the pelvis from iliac
crest through the symphysis pubis with and without IV and oral contrast administration.
Reconstruction coronal and sagittal images were generated.||||||||200304270000|||
```

Acknowledgements (ACK) for ORU

The Remote Operations system sends acknowledgement (ACK) messages to all ORU messages. The structure of the ACK is as follows:

Pos	Element	Length	Use	Example
1	Field Separator		R	Pipe symbol -
2		4	R	ripe symbol - ^~\&
	Encoding Characters 5. Component	1	R	Λ (α
	6. Repeat	1	R	~
	7. Escape	1	R	
	8. Subcomponent	1	R	&
3	Sending Application Name	180	R	Client Vendor Application Name
4	Sending Application Name Sending Facility Name	180	R	Client Facility Name
5	Receiving Application	180	U	Cheff Facility Name
6		180	U	
7	Receiving Facility			YYYYMMDDhhmmss
/	Date and Time of Message	26	R	20030226000000
	Coourity	40	- 11	20030226000000
8	Security Magazine Type	40 7	U R	ACK
	Message Type	-		
10	Message Control Identifier	20	R	6162003124232500
11	Processing ID	3	0	Defaults to Production
	10. Processing Identifier	1		P = Production
	11. Separator (^) 12. Processing Mode	1 1		T = Training
	12. Processing wode	I		D = Debugging
				A = Archive
				R = Restore from archive
				= Initial load
12	HL7 Version	8	R	[empty] = Not present 2.2, 2.3, etc.
12	HL/ Version	0	K	Must be 2.2 or later
13	Sequence Number	15	U	A non-null value in this field implies that
13	Sequence Number	15	U	the sequence number protocol is in use.
				This numeric field is incremented by one
				for each subsequent value.
14	Continuation Pointer	180	U	This field is used to define continuations
		100		in application-specific ways.
15	Accept Acknowledgement Type	2	U	AL = Always
	, toope, total of modgomone Type	_		NE = Never
				ER = Erroneous conditions
				SU = Successfully completion
16	Application Acknowledgement	2	U	AL = Always
	Type	_		NE = Never
	,			ER = Erroneous conditions
				SU = Successfully completion
17	Country Code	2	U	ISO 3166 provides a list of country codes
18	Character Set	6	U	Alternate character sets not used.
19	Principle Language of Message	60	U	ISO 639 provides a list of codes



Message Acknowledgement (MSA) Segment

Pos	Element	Length	Use	Example
1	Acknowledgement Code	2	R	AA = Success
				AE = Error
2	Message Control ID	20	R	20030226000000
3	Text Message	80	0	Success, or
	_			Failure
4	Expected Sequence Number	15	U	
5	Delayed Acknowledgement	1	U	
	Type			
6	Error Condition	100	0	

Example ACK Message

The following is an example success ACK message for an ORU message.

MSH|^~\&|EMRDirect|Example Hospital||| 20030226000000||ACK|6162003124232500|P|2.3||||||MSA|AA|20030226000000|Success||||

The following is an example failure ACK message for an ORU message.

MSH|^~\&|EMRDirect|Example Hospital||| 20030226000000||ACK|6162003124232500|P|2.3||||||MSA|AE|20030226000000||Failure||||

Revision History

Date	Version	Author	Notes
11/2/2004	0.1	Richard Bagdonas	Draft Version
11/15/2004	1.0	Richard Bagdonas	Final Version
4/7/2005	1.1	Richard Bagdonas	Modified ACK on ORU message
10/17/2005	1.2	Richard Bagdonas	Modified OBX required fields