
HL7 Conformance Profile

(R)IS INBOUND SIU S12

Copyright notice:

Copyright 2014 AGFA HealthCare
All rights reserved

Agfa, the Agfa rhombus, Point of Knowledge, and See More. Do More, ... (other trademarks) are trademarks of Agfa Gevaert N.V., Belgium or its affiliates. All other trademarks are held by their respective owners and are used in an editorial fashion with no intention of infringement.

The data in this publication are for illustration purposes only and do not necessarily represent standards or specifications which must be met by Agfa. All information contained herein is intended for guidance purposes only, and characteristics of the products described in this publication can be changed at any time without notice.

Products may not be available for your local area. Please contact your local sales representative for availability information.

Agfa diligently strives to provide as accurate information as possible, but shall not be responsible for any typographical error.

Publication date:

January, 2014

Corporate address:

AGFA HealthCare
SEPTESTAAT 27
B-2640 MORTSEL
BELGIUM
+32(3)4448400

About this Conformance Profile

Segments present in the message structure, but marked as -not supported- are allowed to be present in the message, but are not processed.

The same counts for fields, components, subcomponents marked as not supported.

When messages are received via HL7 MLLP (socket) HL7Server5 processes the message before sending an acknowledgement message.

HL7Server5 only supports original mode acknowledgements, enhanced acks are not supported.

Please verify length attributes at the lowest level of detail if a field consists of components, subcomponents.

For more information on HL7 conformance profiles please consult HL7 ANSI standard chapter 2 and HL7 Implementation/Conformance Technical Committee documents at <http://www.hl7.org/special/committees/ictc/docs.cfm>

Conformance parameters

Message Profile

- HL7 Version: 2.4
- Profile Type: Constrainable
- Topics: confsig-AGFA-2.4-profile-accNE_accNE-Immediate

Encoding Method (s)

ER7, XML

Interaction 1

Dynamic Definition

- Accept Acknowledgement: NE
- Application Acknowledgement: NE
- Acknowledgement Mode: Immediate

Static Definition

- Event Description: SIU/ACK - Notification of new appointment booking
- Message Type: SIU
- Trigger Event: S12
- Message Structure: SIU_S12
- Topics: confsig-AGFA-2.4-static-SIU-S12-null-SIU_S12-2005.3.1--Receiver

Message structure

```
MSH SCH {[NTE]} [ { PID {[PD1]} [PV1] {[PV2]} {[OBX]} {[DG1]} } ] { RGS [ { AIS {[NTE]} } ] [ {
AIG {[NTE]} } ] [ { AIL {[NTE]} } ] [ { AIP {[NTE]} } ] }
```

MSH - Message Header

- Usage: Required
- Cardinality:1..1

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
1	Field Separator	ST		1	R	1..1	e.g.
2	Encoding Characters	ST		4	R	1..1	e.g. ^~\&
3	Sending Application	HD		227	R	1..1	
3.1	namespace ID	IS		50	R	..	e.g. HIS1
4	Sending Facility	HD		227	O	0..1	
4.1	namespace ID	IS		50	O	..	e.g. FAC1
7	Date/Time Of Message	TS		26	R	1..1	
7.1	Date/Time	NM		24	R	..	e.g. 20060125163934110
9	Message Type	CM_MSG	HL70076	15	R	1..1	
9.1	message type	ID	HL70076	3	R	..	e.g. SIU
9.2	trigger event	ID	HL70003	3	R	..	e.g. S12
9.3	message structure	ID	HL70354	7	O	..	e.g. SIU_S12
10	Message Control ID	ST		20	R	1..1	e.g. UC01_TR02A_0000003320
11	Processing ID	PT		3	R	1..1	
11.1	processing ID	ID	HL70103	3	R	..	e.g. P
12	Version ID	VID	HL70104	973	R	1..1	
12.1	version ID	ID	HL70104	60	R	..	e.g. 2.4
18	Character Set	ID	HL70211	16	O	0..*	e.g. 8859/1

1. Field Separator

This field contains the separator between the segment ID and the first real field, MSH-2-encoding characters. As such it serves as the separator and defines the character to be used as a separator for the rest of the message. Recommended value and used by Agfa is |, (ASCII 124).

2. Encoding Characters

This field contains the four characters in the following order: the component separator, repetition separator, escape character, and subcomponent separator. Recommended values and used by Agfa Healthcare are ^~\&, (ASCII 94, 126, 92, and 38).

3. Sending Application

This field uniquely identifies the sending application among all other applications within the network enterprise. The network enterprise consists of all those applications that participate in the exchange of HL7 messages within the enterprise. Entirely site-defined and a parameter for Agfa.

7. Date/Time Of Message

This field contains the date/time that the sending system created the message. If the time zone is specified, it is expected to be the local time zone !

9.3. message structure

Only used/required when the message is hl7 v2.xml encoded

10. Message Control ID

This field contains a number or other identifier that uniquely identifies the message. The receiving system echoes this ID back to the sending system in the Message acknowledgment segment (MSA).

11.1. processing ID

No difference in processing by HL7SERVER5 if Production or Test

12.1. version ID

Versions supported by HL7SERVER5 are 2.2, 2.3, 2.3.1, 2.4

18. Character Set

Character set has to be a subset of the Windows ANSI codepage of the pc where HL7SERVER5 is running ! e.g. ISO 8859/1 on a windows 1252 code page UTF-8 is not supported !

SCH - Scheduling Activity Information

- Usage: Required

- Cardinality:1..1

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
2	Filler Appointment ID	EI		427	R	1..1	
2.1	entity identifier	ST		20	R	..	e.g. 000253
6	Event Reason	CE		483	R	1..1	
6.2	text	ST		254	O	..	e.g. Pain in the chest
7	Appointment Reason	CE		483	C	0..1	
7.1	identifier	ST		50	O	..	e.g. CHUPPAL
7.2	text	ST		254	O	..	e.g. Chest Erect PA + Lateral
7.3	name of coding system	IS		20	O	..	e.g. RAD
11	Appointment Timing Quantity	TQ		1545	R	1..*	
11.3	duration	ST		10	C	..	e.g. M15
11.4	start date/time	TS		26	R	..	
11.4.1	Date/Time	NM		24	R	..	e.g. 200602241500
11.5	end date/time	TS		27	R	..	
11.5.1	Date/Time	NM		24	R	..	e.g. 200602241515
11.6	priority	ST		3	O	..	e.g. S
12	Placer Contact Person	XCN		3002	O	0..*	

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
12.1	ID number (ST)	ST		15	O	..	e.g. 13131
12.2	family name	FN		184	O	..	
12.2.1	surname	ST		40	O	..	e.g. WESTGEEST
12.3	given name	ST		30	O	..	e.g. MARC
15	Placer Contact Location	PL		1230	O	0..1	
15.1	point of care	IS		15	O	..	e.g. ORTHO
16	Filler Contact Person	XCN		3002	R	1..1	
16.1	ID number (ST)	ST		15	O	..	
16.2	family name	FN		184	O	..	
16.2.1	surname	ST		40	O	..	
20	Entered By Person	XCN		3002	R	1..1	
20.1	ID number (ST)	ST		40	O	..	e.g. CLERK1
20.2	family name	FN		184	O	..	
20.2.1	surname	ST		40	O	..	
25	Filler Status Code	CE	HL70278	483	O	0..1	
25.1	identifier	ST		20	O	..	e.g. Booked
26	Placer Order Number	EI		427	O	0..2	
26.1	entity identifier	ST		50	O	..	e.g. 4646464
26.2	namespace ID	IS		20	O	..	e.g. HIS

2.1. entity identifier

Unique appointment id in the scheduling application

6. Event Reason

Required by HL7

6.2. text

Appointment remark

7. Appointment Reason

Procedure code

Condition Predicate:

Only used when there's no AIS segment present

11.3. duration

Condition Predicate:

Only used when componedate/time is empty

11.4.1. Date/Time

Date/time the examination starts

11.5. end date/time

QPlanner restriction: appointment end date should be on the same day as the appointment start date

11.6. priority

Mapping via parameter PriorityMap

12. Placer Contact Person

Requesting physician

15. Placer Contact Location

Requesting department

16. Filler Contact Person

Required for hl7, but not stored in the database

20. Entered By Person

Required for hl7 but not stored in the database

25. Filler Status Code

When value is COMPLETE the appointment is considered "done" This field is also use to mark appointments as tentative

26. Placer Order Number

Used to link the appointment to an order created in a 3rd party order placer system.

NTE - Notes and Comments

- Usage: Optional
- Cardinality:0..*
- Implementation note: Appointment remark or clinical information

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
3	Comment	FT		65536	O	0..*	e.g. Patient cannot walk fast
4	Comment Type	CE	HL70364	483	O	0..1	
4.1	identifier	ST		10	O	..	e.g. RE

4.1. identifier

If value = CI the comment is stored as clinical information.

Segment group: PATIENT

- Usage: Optional
- Cardinality: 0..1

Segment group: PATIENT

- Usage: Required
- Cardinality:1..*

PID - Patient identification

- Usage: Required
- Cardinality:1..1
- Implementation note: If the patient doesn't exist yet in the Agfa db the patient record is created. If the patient already exists his/her data is NOT updated unless you modify default parameter values.

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
2	Patient ID	CX		1913	O	0..1	
2.1	ID	ST		20	O	..	
3	Patient Identifier List	CX		1913	R	1..*	
3.1	ID	ST		20	R	..	e.g. 001791
3.2	Check digit	ST		200	O	..	
3.3	code identifying the check digit scheme employed	ID	HL70061	200	O	..	
3.4	assigning authority	HD		603	O	..	
3.4.1	namespace ID	IS		200	O	..	e.g. HIS
3.4.2	universal ID	ST		200	O	..	

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
3.4.3	universal ID type	ID		200	O	..	
3.5	identifier type code (ID)	ID	HL70203	200	O	..	e.g. MR
3.6	assigning facility	HD		603	O	..	
3.6.1	namespace ID	IS		200	O	..	e.g. FACILITY1
3.6.2	universal ID	ST		200	O	..	
3.6.3	universal ID type	ID		200	O	..	
3.7	effective date (DT)	DT		24	O	..	e.g. 20051107
3.8	expiration date	DT		24	O	..	
4	Alternate Patient ID - PID	CX		1913	O	0..1	
4.1	ID	ST		20	O	..	e.g. 1234567
5	Patient Name	XPN		1103	R	1..1	
5.1	family name	FN		174	O	..	
5.1.1	surname	ST		30	R	..	e.g. O Connor
5.2	given name	ST		30	O	..	e.g. Jane
5.3	second and further given names or initials thereof	ST		30	O	..	e.g. C
5.4	suffix (e.g., JR or III)	ST		15	O	..	
5.5	prefix (e.g., DR)	ST		100	O	..	e.g. DR.
6	Mother's Maiden Name	XPN		1103	O	0..1	
6.1	family name	FN		174	O	..	
6.1.1	surname	ST		30	O	..	
7	Date/Time Of Birth	TS		26	O	0..1	
7.1	Date/Time	NM		24	R	..	e.g. 19931022
8	Administrative Sex	IS	HL70001	1	O	0..1	e.g. F
11	Patient Address	XAD		631	O	0..*	
11.1	street address (SAD)	SAD		318	O	..	
11.1.1	street or mailing address	ST		254	O	..	e.g. Kortrijksesteenweg
11.2	other designation	ST		20	O	..	e.g. 254
11.3	city	ST		30	O	..	e.g. Sint Martens Latem
11.4	state or province	ST		20	O	..	e.g. OVL
11.5	zip or postal code	ST		20	O	..	e.g. 9831
11.6	country	ID		20	O	..	e.g. BEL
11.7	address type	ID	HL70190	10	O	..	e.g. P
13	Phone Number - Home	XTN		850	O	0..1	
13.1	[(999)] 999-9999 [X99999][C any text]	TN		15	O	..	
13.5	Country Code	NM		15	O	..	e.g. 32
13.6	Area/city code	NM		15	O	..	e.g. 3
13.7	Phone number	NM		15	O	..	e.g. 4448150
13.8	Extension	NM		15	O	..	e.g. 500
14	Phone Number - Business	XTN		850	O	0..1	
14.1	[(999)] 999-9999 [X99999][C any text]	TN		15	O	..	e.g. 024448150
14.5	Country Code	NM		15	O	..	

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
14.6	Area/city code	NM		15	O	..	
14.7	Phone number	NM		15	O	..	
14.8	Extension	NM		15	O	..	
15	Primary Language	CE		483	O	0..1	
15.1	identifier	ST		20	O	..	e.g. EN
16	Marital Status	CE	HL70002	483	O	0..1	
16.1	identifier	ST		10	O	..	e.g. M
17	Religion	CE	HL70006	483	O	0..1	
17.1	identifier	ST		40	O	..	
17.2	text	ST		40	O	..	
18	Patient Account Number	CX		1913	O	0..1	
18.1	ID	ST		30	O	..	e.g. 2590852
18.4	assigning authority	HD		257	O	..	
18.4.1	namespace ID	IS		50	O	..	e.g. HIS1
18.7	effective date (DT)	DT		24	O	..	e.g. 20051107
18.8	expiration date	DT		24	O	..	
19	SSN Number - Patient	ST		50	O	0..1	e.g. 19931022175
23	Birth Place	ST		30	O	0..1	e.g. Deinde
24	Multiple Birth Indicator	ID	HL70136	1	O	0..1	e.g. Y
25	Birth Order	NM		2	O	0..1	e.g. 2
26	Citizenship	CE	HL70171	483	O	0..1	
26.1	identifier	ST		20	O	..	e.g. BE
29	Patient Death Date and Time	TS		26	O	0..1	
29.1	Date/Time	NM		24	O	..	
30	Patient Death Indicator	ID	HL70136	1	O	0..1	e.g. N

2. Patient ID

Please use PID-3 and map them using the parameters PIDDomainForCode, PIDDomainForHISCode ... to the PATIENTS.xxx columns

3. Patient Identifier List

Patient Identifier (list) which UNIQUELY identifies a single patient. Combination of components ID and Assigning Authority should be sufficient to UNIQUELY identify a patient.

3.4. assigning authority

Authority/System that generated the patient identifier

3.6. assigning facility

Facility in which the patient identifier was generated

4. Alternate Patient ID - PID

Please use PID-3 and map them using the parameters PIDDomainForCode, PIDDomainForHISCode ... to the PATIENTS.xxx columns

5. Patient Name

Patient name - no repetitions allowed!

6. Mother's Maiden Name

Sometimes used in France to exchange the patients maiden name

7. Date/Time Of Birth

Patient birth date - is a required field in the RIS database

11. Patient Address

The occurrence that has an address type (PID-11-7) of P or M or blank is considered the main address and is stored in the PATIENTS table. ALL occurrences are stored in PAT_ADDRESSES.

11.6. country

In a multi-site environment with multiple HIS systems, make sure that each HIS is using the same code-set. HL7.org suggests the 3 character alphanumeric codes from the ISO 3366-1 table.

11.7. address type

In a multi-site environment with multiple HIS systems, make sure that each HIS is using the same code-set.

13. Phone Number - Home

Patients primary phone number - only the first occurrence is used !

14. Phone Number - Business

Additional (second) phone number

16.1. identifier

In a multi-site environment with multiple HIS systems, make sure that each HIS is using the same code-set.

18. Patient Account Number

Account number (billing) will be linked to the visit number (PV1-19). In a multi-site environment with multiple HIS systems, make sure that the component Assigning Authority is provided !

19. SSN Number - Patient

Social security number

PD1 - patient additional demographic

- Usage: Not supported

PV1 - Patient visit

- Usage: Optional

- Cardinality: 0..1

- Implementation note: By default a non ADT interface doesn't create/update visits, but refers to the visit identified by PV1-19

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
2	Patient Class	IS	HL70004	1	R	1..1	e.g. I
15	Ambulatory Status	IS	HL70009	2	O	0..1	
18	Patient Type	IS		10	O	0..1	e.g. H1
19	Visit Number	CX		1913	R	1..1	
19.1	ID	ST		20	R	..	e.g. 200411143
19.4	assigning authority	HD		258	O	..	
19.4.1	namespace ID	IS		50	O	..	e.g. HIS1

2. Patient Class

Required by HL7 but not processed

15. Ambulatory Status

Patient mobility

18. Patient Type

Patient type (inpatient, outpatient)

19.4. assigning authority

Encouraged to use this component in a multi-site environment

PV2 - Patient visit - additional information

- Usage: Not supported

OBX - Observation/Result

- Usage: Optional

- Cardinality:0..*

- Implementation note: Additional information - can be stored as user definable properties, xml, image or txt in Agfa RIS

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
1	Set ID - OBX	SI		4	O	0..1	e.g. 1
2	Value Type	ID	HL70125	2	R	1..1	e.g. NM
3	Observation Identifier	CE		483	R	1..1	
3.1	identifier	ST		20	R	..	e.g. WEIGHT
3.2	text	ST		50	O	..	e.g. Weight
4	Observation Sub-Id	ST		20	O	0..1	
5	Observation Value	*		65536	R	1..1	e.g. 75
6	Units	CE		483	O	0..1	
6.1	identifier	ST		20	O	..	e.g. kg
6.2	text	ST		20	O	..	
11	Observation Result Status	ID	HL70085	1	R	1..1	

3.1. identifier

Property identifier

3.2. text

Property description

4. Observation Sub-Id

If present concatenated with the property id.

5. Observation Value

Property value

11. Observation Result Status

Required for HL7 but not used here.

DG1 - Diagnosis

- Usage: Optional

- Cardinality:0..*

- Implementation note: Used to link ICD9-CM or ICD10-CM diagnostic codes to an appointment.

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
1	Set ID - DG1	SI		4	R	1..1	e.g. 1
3	Diagnosis Code - DG1	CE	HL70051	483	O	0..1	
3.1	identifier	ST		20	O	..	e.g. 784.0
3.2	text	ST		50	O	..	

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
3.3	name of coding system	IS	HL70396	3	O	..	e.g. I9C

3. Diagnosis Code - DG1

Diagnosis codes have to exist in the Agfa setup.

3.3. name of coding system

I9C (=ICD-9-CM) and I10C (=ICD-10-CM) are supported

End of segment group PATIENT

End of segment group PATIENT

Segment group: RESOURCES

- Usage: Required
- Cardinality:1..*

RGS - Resource Group

- Usage: Required
- Cardinality:1..1

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
1	Set ID - RGS	SI		4	R	1..1	e.g. 1

Segment group: SERVICE

- Usage: Optional
- Cardinality: 0..1

Segment group: SERVICE

- Usage: Required
- Cardinality:1..*

AIS - Appointment Information - Service

- Usage: Required
- Cardinality:1..1

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
1	Set ID - AIS	SI		4	R	1..1	e.g. 1
3	Universal Service Identifier	CE		483	R	1..1	
3.1	identifier	ST		20	R	..	e.g. CHUPPAL
3.2	text	ST		50	O	..	e.g. Chest Erect PA + Lateral
3.3	name of coding system	IS		20	O	..	e.g. RAD
4	Start Date/Time	TS		26	O	0..1	
5	Start Date/Time Offset	NM		20	O	0..1	
7	Duration	NM		20	O	0..1	
8	Duration Units	CE		483	O	0..1	
8.2	text	ST		3	O	..	
8.3	name of coding system	IS	HL70396	3	O	..	
8.4	alternate identifier	ST		3	O	..	
8.5	alternate text	ST		3	O	..	

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
8.6	name of alternate coding system	IS	HL70396	3	O	..	
11	Placer Supplemental Service Information	CE	HL70411	483	O	0..2	
11.1	identifier	ST		20	O	..	

3. Universal Service Identifier

Exam/procedure

3.3. name of coding system

Performing department id

4. Start Date/Time

as from 2005.3.4

5. Start Date/Time Offset

as from 2005.3.4

7. Duration

as from 2005.3.4

8. Duration Units

as from 2005.3.4

11.1. identifier

Used to specify the exam more detailed, e.g. left - subdivision in QPlanner

NTE - Notes and Comments

- Usage: Optional
- Cardinality:0..*
- Implementation note: Exam remark

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
3	Comment	FT		65536	O	0..1	

End of segment group SERVICE

End of segment group SERVICE

Segment group: GENERAL RESOURCE

- Usage: Optional
- Cardinality: 0..1

Segment group: GENERAL RESOURCE

- Usage: Required
- Cardinality:1..*

AIG - Appointment Information - General Resource

- Usage: Required
- Cardinality:1..1
- Implementation note: Used for modalities or patient pre- and post-op time registration

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
1	Set ID - AIG	SI		4	R	1..1	e.g. 1
3	Resource ID	CE		483	C	0..1	
3.1	identifier	ST		20	O	..	e.g. 001791

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
3.2	text	ST		30	O	..	e.g. O Connor
4	Resource Type	CE		483	R	1..1	
4.1	identifier	ST		20	O	..	e.g. PATIENT
9	Start Date/Time Offset	NM		20	O	0..1	e.g. -5
10	Start Date/Time Offset Units	CE		483	O	0..1	
10.1	identifier	ST		1	O	..	e.g. M
10.2	text	ST		20	O	..	e.g. Minutes
11	Duration	NM		20	O	0..1	e.g. 30
12	Duration Units	CE		483	O	0..1	
12.1	identifier	ST		1	O	..	e.g. M
12.2	text	ST		20	O	..	e.g. Minutes

3.1. identifier

Resource id or patient id

3.2. text

Resource name

4. Resource Type

If PATIENT - it's used for setting pre- and post-op times. Other resource types are considered modalities.

11. Duration

Total duration of the appointment, i.e. including pre-op and post-op

NTE - Notes and Comments

- Usage: Not supported

End of segment group GENERAL_RESOURCE

End of segment group GENERAL_RESOURCE

Segment group: LOCATION_RESOURCE

- Usage: Optional

- Cardinality: 0..1

Segment group: LOCATION_RESOURCE

- Usage: Required

- Cardinality: 1..*

AIL - Appointment Information - Location Resource

- Usage: Required

- Cardinality: 1..1

- Implementation note: Used for exam rooms or performing department.

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
1	Set ID - AIL	SI		4	R	1..1	e.g. 1
3	Location Resource ID	PL		1230	O	0..1	
3.1	point of care	IS		20	O	..	e.g. RAD
3.2	room	IS		20	O	..	
3.9	Location description	ST		50	O	..	e.g. Radiology
4	Location Type-AIL	CE		483	R	1..1	

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
4.1	identifier	ST		1	R	..	e.g. D

3.1. point of care

Performing department id or exam room id

3.2. room

exam room id

4.1. identifier

D (performing department) or E (exam room)

NTE - Notes and Comments

- Usage: Not supported

End of segment group LOCATION_RESOURCE

End of segment group LOCATION_RESOURCE

Segment group: PERSONNEL_RESOURCE

- Usage: Optional

- Cardinality: 0..1

Segment group: PERSONNEL_RESOURCE

- Usage: Required

- Cardinality: 1..*

AIP - Appointment Information - Personnel Resource

- Usage: Required

- Cardinality: 1..1

- Implementation note: Performing physician

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
1	Set ID - AIP	SI		4	R	1..1	e.g. 1
3	Personnel Resource ID	XCN		3002	C	0..2	
3.1	ID number (ST)	ST		20	O	..	e.g. 12313
3.2	family name	FN		174	O	..	
3.2.1	surname	ST		30	O	..	e.g. Performing
3.3	given name	ST		20	O	..	e.g. Physician

NTE - Notes and Comments

- Usage: Not supported

End of segment group PERSONNEL_RESOURCE

End of segment group PERSONNEL_RESOURCE

End of segment group RESOURCES