Integrating the Healthcare Enterprise

IHE Radiology (RAD)
Technical Framework

Volume 4
IHE RAD TF-4
National Extensions

Revision 13.0 – Final Text

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1 Introduction

110 Integrating the Healthcare Enterprise (IHE) is an initiative to promote the use of standards to achieve interoperability of health information technology (HIT) systems and effective use of electronic health records (EHRs). IHE provides a forum for volunteer committees of care providers, HIT experts and other stakeholders in several clinical and operational domains to reach consensus on standards-based solutions to critical interoperability issues. IHE publishes the

115 implementation guides they produce (called *IHE profiles*), first to gather public comment and then for trial implementation by HIT vendors and other system developers.

IHE provides a process for developers to test their implementations of IHE profiles, including regular testing events called Connectathons. After a committee determines that a profile has undergone sufficient successful testing and deployment in real-world care settings, it is

120 incorporated in the appropriate IHE Technical Framework, of which the present document is a volume. The Technical Frameworks provide a unique resource for developers and users of HIT systems: a set of proven, standards-based solutions to address common interoperability issues and support the convenient and secure use of EHRs.

Purchasers can specify conformance with appropriate IHE profiles as a requirement in requests

125 for proposal. Vendors who have successfully implemented IHE profiles in their products can publish conformance statements (called IHE Integration Statements) in the IHE Product Registry (http://ihe.net/IHE_Product_Registry).

The current versions of this and all IHE Technical Framework documents are available at http://ihe.net/Technical_Frameworks. Comments may be submitted at

130 http://www.ihe.net/Radiology_Public_Comments.

IHE domain committees are responsible for developing and publishing Technical Framework documents. This document is published by the IHE Radiology committees. Information on the activities of this domain, including its committee rosters and how to participate, is available at http://wiki.ihe.net/index.php?title=Domains.

135 General information about IHE, including its governance structure, sponsorship, member organizations and work process, is available at www.ihe.net.

1.1 Overview of Technical Framework

An IHE Technical Framework describes use cases requiring interoperability of HIT systems and defines functional components (called *IHE actors*) of these systems. Using established standards,

140 they specify the actions and interactions of these actors, including the content objects they produce and exchange. Volume 1 of the Radiology Technical Framework provides high-level overviews of each profile, the use case it addresses and the actors involved. Volumes 2 and 3 provide detailed specifications of each transaction and other technical requirements. The current document, Volume 4, describes national extensions to the IHE Radiology Technical Framework.

145 ## 1.2 Overview of Volume 4

This volume contains information about the scope of national extensions to the transactions defined in the IHE Technical Framework. Section 2 describes the permitted scope of national extensions and the process by which national IHE initiatives can propose such extensions for approval by the IHE Technical Committee and documentation in the IHE Technical Framework.

150 Sections 3 through 9 provide the sets of national extensions that have thus far been approved by IHE: those from France, Germany, United States, Italy, United Kingdom, Canada, and Spain.

2   Overview of National Extensions to the Technical Framework

The goal of IHE is to promote implementation of standards-based solutions to improve workflow and access to information in support of optimal patient care. To that end, IHE encourages the development of IHE National Deployment Committees to address issues specific to local health systems, policies and traditions of care. The role of these organizations and information about how they are formed is available at http://ihe.net/Governance/#National_Deployment.

2.1   Scope of National Extensions

National extensions to the IHE Technical Framework are allowed in order to address specific local healthcare needs and promote the implementation of the IHE Technical Frameworks. They may add (though not relax) requirements that apply to the Technical Framework generally or to specific transactions, Actors and Integration Profiles. Some examples of appropriate national extensions are:

- Require support of character sets and national languages
- Provide translation of IHE concepts or data fields from English into other national languages
- Extensions of patient or provider information to reflect policies regarding privacy and confidentiality
- Changes to institutional information and financial transactions to conform to national health system payment structures and support specific local care practices

All national extensions shall include concise descriptions of the local need they are intended to address. They shall identify the precise transactions, actors, integration profiles and sections of the Technical Framework to which they apply. And they must provide technical detail equivalent to that contained in the Technical Framework in describing the nature of the extension.

2.2   Process for Developing National Extensions

National extension documents are to be developed, approved and incorporated in the Technical Framework in coordination with the IHE Technical Committee and its annual cycle of activities in publishing and maintaining the Technical Framework. The first prerequisite for developing a national extension document is to establish a national IHE initiative and make information regarding its composition and activities available to other IHE initiatives.

Established IHE national initiatives may draft a document describing potential national extensions containing the general information outlined above and similar in form to those found in sections 4-6 of the current document. They submit this draft document to the IHE Technical Committee for review and comment. Based on discussion with the Technical Committee, they prepare and submit finalized version of the document in appropriate format for incorporation into the Technical Framework. The publication of National Extensions is to be coordinated with the annual publication cycle of other Technical Framework documents in the relevant domain. The annual cycle for Radiology is available at http://wiki.ihe.net/index.php?title=Radiology.

2.3 Process for Proposing Revisions to the Technical Framework

190 In addition to developing national extension documents to be incorporated in the Technical Framework, national IHE initiatives may also propose revisions to the global Technical Framework. These may take the form of changes to existing transactions, actors or integration profiles or the addition of new ones. Such general changes would be subject to approval by the IHE Technical and Planning Committees.

195 Changes that are minor in scope, such as suggestions for clarifications or corrections to documentation, may be submitted throughout the year via the ongoing errata tracking process. Comments on this document may be submitted at http://www.ihe.net/Radiology_Public_Comments.

More substantial revision proposals, such as proposals to add new integration profiles, should be
200 submitted directly to the IHE Technical and Planning Committees. The initial submission of such proposed revisions to the global Technical Framework should be a 1-2 page white paper containing:

- A description of the clinical need addressed by the proposed revision with appropriately detailed use cases
205
- An overview of the proposed technical approach for meeting this clinical need, including the established standards to be used

- Any known constraints to the proposed solution (e.g., maturity of standards or necessity of regulatory compliance)

- An estimate of the level of effort for developing and implementing the proposed solution

210 The IHE Planning and Technical Committees will give due consideration to all such revision proposals received from national IHE initiatives and will notify their originators of their disposition. Revisions or additions that are accepted as work items for the Technical Committee will be completed in its annual revision cycle of the Technical Framework.

215 ## 3   National Extensions for IHE France

The national extensions documented in this section shall be used in conjunction with the definitions of integration profiles, actors and transactions provided in volumes 1-3 of the IHE Technical Framework. This section includes extensions and restrictions to effectively support the regional practice of healthcare in France. It also translates a number of English terms to ensure
220 correct interpretation of requirements of the Technical Framework.

3.1   Comments

This national extension document was authored under the sponsorship and supervision of GMSIH and JFR, who welcome comments on this document and the IHE France initiative. Comments should be directed to:

225   Karima Bourquard
        IHE-France project manager
        Email: kbourquard@yahoo.fr

3.2   IHE-F 2002 Scope

The extensions, restrictions and translations specified apply to the following IHE Integration
230 profiles:

- Scheduled Workflow
- Patient Reconciliation
- Consistent Presentation of Images
- Key Image Notes
235 - Simple Image and Numerical Report
- Access to Radiology Information

3.3   Extended DICOM Character Sets

The support of accented characters is required for all actors with DICOM-based transactions. The Specific Character Set (0008,0005) Attribute shall contain the value "ISO_IR 100" in order
240 to select ISO 8859/1 Latin-1 characters.

3.4   Extended HL7 Character set

The support of accented characters is required for all actors with HL7 based transactions. The Field MSH 18 shall contain the value "8859/1" in order to select the ISO 8859 Latin-1 characters.

245 ### 3.5   Translation of Specific Fields of the PID Segment

The table below provides the translation of specific fields of the PID Segment:

La table ci-dessous fournit la traduction de champs specific du segment PID.

Table 3.5-1: Translation of PID Segment Fields

Champ (Field)	Interprétation/Traduction
Patient Identifier List (PID – 3)	IPP (Identifiant Permanent du Patient)
Legal Name (PID – 5)	Nom patronymique
Maiden Name (PID – 5)	Nom de jeune fille
Display Name (PID – 5)	Nom usuel
SSN Number Patient (PID – 19) This is the personal social security number of the patient which may not be the social security number used for the insurance billing payment.	Numéro de Sécurité Social du patient.
Patient Account Number (PID – 18) Unique identifier for collecting and grouping all elements necessary for charging AND / OR the transmission to the insurance company for charging.	Numéro de compte patient Numéro unique qui permet de collecter et de grouper tous les éléments nécessaires à la facturation ET / OU à la transmission vers les organismes d'assurances et mutuelles, pour prise en charge

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3.6 Insurance Information

The IHE Technical Framework includes the IN1 and IN2 segments as an option for the purpose of communicating the insurance information of the patient.

255 IHE-France supports the optional use of the segments IN1 and IN2 in order to convey the social security number when used as an insurance number for the patient care. It is used when patient charge posting is made by the clinical / radiology department. It is conveyed through A01, A04 or A08.

Table 3.6-1: IHE profile – IN1 Segment

SEQ	LEN	DT	OPT	TBL#	ITEM#	ELEMENT NAME
1	4	SI	R			Set ID – IN1
2	60	CE	R			Insurance Plan ID
3	59	CX	R			Insurance Company ID

260 *Adapted from the HL7 Standard, version 2.3.1*

Table 3.6-2: IHE profile – IN2 Segment

SEQ	LEN	DT	OPT	TBL#	ITEM#	ELEMENT NAME
1	60	XON	O			Insured Employee ID
2	60	XON	O			Insured Social Security Number

Adapted from the HL7 Standard, version 2.3.1

265 ## 3.7 Forbidden PID Fields

In France, it is illegal to transmit the Fields PID-10 (Race) and PID-22 (Ethnic Group).

En France, il est interdit de transmettre les champs PID-10 (Race) et PID-22 (Groupe éthnique).

3.8 Syntax Rules for PID-5 (Patient Name)

Last name prefix (<family name (ST) & <last_name_prefix (ST)>) will be used for names with «
270 particule ». Prefix sera utilisé pour la particule des noms à particules.

3.9 Syntax Rules for PID-11 (Patient Address)

The ZIP or Postal Code will contain the "code postal".

Le "ZIP or Postal Code" devra contenir le Code Postal.

3.10 Extensions of PID-16 (Marital Status)

275 Two values, G for Living Together and P for Domestic Partner shall be added to the The Marital
Status table 002 of HL7 2.3.1 (User defined table). No IHE-F implementation shall extend this
table.
Note: These G and P values have been obtained from HL7 2.4.

3.11 Translations of PID-16 (Marital Status) and Selection of Values

280 The table below includes the translations of the PID-16, Marital Status:

La table ci-dessous fournit la traduction de champs specific du segment PID-16, Marital Status:

Table 3.11-1: Translation of PID-16, Marital Status

Valeur	Description	Interprétation/Traduction
A	Separated	**Séparé**
D	Divorced	**Divorcé**
M	Married	**Marié**
S	Single	**Célibataire**
W	Widowed	**Veuf/Veuve**
G	Living together	**Concubin**
P	Domestic Partner	**Pacte Civil de Solidarité (PACS)**

3.12 Translations of PV1-19, Visit Number

285 This number corresponds to physical visit of the patient into the hospital. The patient account
number may group one or more visit number (PV1-19)

Ce numéro correspond à un passage physique dans l'établissement. Le patient account number (PID-18) regroupe un ou plusieurs «Visit number» (PV1-19).

The table below provides the translation of specific fields of the PV1 Segment:

290   La Table ci-dessous donne la traduction de champs specifiques du segment PV1:

Table 3.12-1: Translation of Specific Fields of PV-1 Segment

Champ	Interprétation/Traduction
Visit Number (PV1 – 19)	Numéro de séjour / numéro de passage ou mouvement

3.13 Extensions of PV1-2 (Patient Class)

295   Two values, W for Week in Hospital, S for Psychiatric, K for Newborn, shall be added to the The Patient Class Table 004 of HL72.3.1 (User defined table). No IHE-F implementation shall extend this table.
Note: The Addition of the W, S and K values will be submitted to the HL7 French Chapter when created.

300 ## 3.14 Translations of PV1-2 (Patient Class) and Selection of Values

The table below includes the translations of the PV1-2, Patient Class and shall not be extended:

La table ci-dessous fournit la traduction de champs specifiques du segment PV1-2, Patient Class et ne doit pas être étendue:

305   **Table 3.14-1: PV1-2 Values and Translations**

Valeur	Description	Interprétation/Traduction
E	Emergency	Urgence
I	Inpatient	Hospitalisé
O	Outpatient	Externe
P	Preadmit	Peut comprendre les catégories nationale : Hospitalisation programmées, Consultants externes programmés, Psychiatrie programmées, Résidents programmés
R	Recuring Patient	Résident
B	Obstetrics	Obstétrique
D	Day hospital	Hopital du jour
W	Week hospital	Hopital de semaine
S	Psychiatric	Psychiatrie

Valeur	Description	Interprétation/Traduction
K	Newborn	Nouveau né

Note: For S=Psychiatry, in the context of patient admission in this class, the type of admission will be refined in the field PV2-3 Admit Reason *(See Section A.4.15).*

Note : Pour S= Psychiatrie, dans le cadre de l'admission d'un patient dans cette catégorie, le type d'admission sera précisé dans le champ PV2-3 Admit Reason *(voir section A.4.15).*

3.15 Visit number usage and interpretation

Field PV1-2 Visit Number is a required field in IHE France.

If Field PV1-2 is « I » then PV1-19 is interpreted as n° de séjour.

If Field PV1-2 is « D or W » then PV1-19 is interpreted as n° de séjour.

If Field PV1-2 is « O » Outpatient then PV1-19 is interpreted as n° de consultation.

If Field PV1-2 is « R » Inpatient then PV1-19 is interpreted as n° de séance.

3.16 Patient Account Number

Field PID-18 Patient Account Number is an optional field in IHE France.

The field PID-18 may be used in cases when a patient may have multiple visits (each visit having independent transfer and discharge), but where all the visits need to be linked under one Case/Episode number (either for billing or clinical tracking reasons).

3.17 Translations of PV1-4 (Admission Type) and Selection of Values

The table below includes the translations of the PV1-4, Admission Type and shall not be extended:

La table ci-dessous fournit la traduction de champs specifiques du segment PV1-4, Admission Type et ne doit pas être étendu:

Valeur	Description	Interprétation/Traduction
A	Accident	Accident de travail
C	Elective	Confort (chirurgie esthétique…)
E	Emergency	Urgence
L	Labor and Delivery	Accouchement
N	Newborn (Birth in Healthcare facility)	Nouveau Né
R	Routine	Routine
U	Urgent	Urgent

3.18 Extension and Translations of Physician Types in PV1

The optionality status of PV1-7, PV1-8, PV1-9 and PV1-17 is R2 for French implementation.

330   The table below includes the translations of the PV1 Physician Types:

La table ci-dessous fournit la traduction de champs relatif aux types de doctuers dans PV1:

Table 3.18-1: Translation of PV1 Physician Types

Field	Description	Interprétation/Traduction
PV1-7Attending doctor:	The person primarily responsible for the care of the patient during a particular health care visit (generally used for inpatient events, but could be extended to an outpatient visit as well.)	Médecin responsable pendant la durée de l'admission.
PV1-8Referring doctor	Is any physician who referred the patient to the care of another physician (generally a specialist) for a particular visit. The referring physician might be noted in an HL7 event so that she/he receives a copy of any test results or documentation of care.	Médecin (en général extérieur à l'établissement) qui a adressé le patient.
PV1-9Consulting doctor	Is generally a specialist who sees a patient as the result of a referral or a consultation order. She/he is not the attending physician for the case, although that status could be transferred to a consulting physician at some point.	Le médecin qui est consulté pour un deuxième avis.
PV1-17 Admitting doctor	Is the physician who decides that a patient meets the criteria for an inpatient admission to a hospital during a specific visit. The admitting physician is responsible for evaluating the patient so that their acuity satisfies admission criteria.	Médecin de l'établissement qui décide d'hospitaliser un patient. (ex. En cas d'urgence)

3.19 Translation of PV1-51 Visit Indicator and Selection of Value

335   IHE France will only use the visit indicator at the visit level, there is no accounting information issued.

Table 3.19-1: Translation of PV1-51 Visit Indicator

Valeur	Description	Interprétation/Traduction
V	Visit	Venue

3.20 Extension of PV2-3 (Admit Reason)

Two values listed in Table A.4-1 shall be added to the Table 004 of HL72.3.1 (User defined
340   table). No IHE-F implementation shall extend this table.

3.21 Translation of PV2-3 (Admit Reason) and Selection of Value

In the case of the hospitalization of a patient in psychiatry, one shall use the field PV2-3 Admit
Reason as defined below:

Dans le cadre d'une hospitalisation d'un patient en psychiatrie alors on devra utiliser le champ
345   PV2-3 Admit Reason afin de préciser le mode de placement.

Table 3.21-1: PV2-3 Interpretation of Values

Code	Mode de placement
HL	Hospitalisation Libre
HO	Placement d'office
HDT	Hospitalisation à la demande d'un tiers
LV	Levée d'hospitalisation
SE	Sortie à l'essai

3.22 Management of Functional Units

A major difference between the management of responsibilities between the USA and France is
350   that the responsibility for a patient is often managed at the level of a functional unit rather than at
the level of an attending doctor. For this purpose the Z Segment ZFU has been created.

*Il y une différence entre la manière dont les responsabilités sont gérées aux USA et en France.
Alors qu'aux USA la responsabilité du patient est très souvent liée au médecin (Attending
355   Doctor), en France, celle-ci est rattachée à l'unité fonctionnelle. C'est pourquoi le champ privé
ZFU a été crée.*

For IHE-F, the ZFU segment is required for messages A01, A02, A04, A05, A06, A07, and A08.

*Pour IHE-F ce segment est obligatoire pour les messages: A01, A02, A04, A05, A06, A07, and
A08.*

360   Field ZFU-1 Nursing Functional Unit is responsible for the care of the patient.
C'est l'unité fonctionnelle responsable des soins donnés au patient.

Field ZFU-2 Housing Functional Unit is responsible for housing the patient.
C'est l'unité fonctionnelle d'hébergement.

Field ZFU-3 Medical Functional Unit is the unit for which the attending doctor is operating.
365   *C'est l'unité fonctionnelle qui a la responsabilité Médicale du patient.*

Table 3.22-1: IHE profile - ZFU Segment

SEQ	LEN	DT	OPT	TBL#	ITEM#	ELEMENT NAME
1	60	XON	C			Nursing Functional Unit: *UF soin*
2	60	TS	C			Nursing Functional Unit Start date/time
3	60	XON	C			Housing Functional Unit: *UF hébergement*
4	60	TS	C			Housing Functional Unit Start date/time
5	60	XON	C			Medical Functional Unit: *UF médicale*
6	60	TS	C			Medical Functional Unit Start date/time

370 Conditions: At least one of these three functional units is required (name and date/time that the patient has "entered" the functional unit). Two or three of them can have the same value.

Conditions : Au moins une des ces unités fonctionelles est obligatoire (nom et la date/heure le patient est « entré » sous l'unité fonctionnelle). Deux ou trois d'entre eux peuvent avoir la même valeur.

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4 National Extensions for IHE Germany

The national extensions documented in this section shall be used in conjunction with the definitions of integration profiles, actors and transactions provided in volumes 1-3 of the IHE
380 Technical Framework. This section includes extensions and restrictions to effectively support the regional practice of healthcare in Germany.

4.1 Comments

The IHE-D Initiative welcomes comments on this document and the IHE Germany initiative.
Comments should be directed to the IHE-D Working Group <ihe-d@rad.rwth-aachen.de> or to
385 Marco Eichelberg <eichelberg@offis.de>, IHE-D Technical Project Manager.

4.2 Scope

The extensions, restrictions and translations specified apply to the following IHE Integration Profiles:

- Scheduled Workflow
390 - Patient Reconciliation
- Consistent Presentation of Images

4.3 DICOM: Support for ISO Latin 1

All actors with DICOM based transactions shall support the value "ISO_IR 100" for the attribute (0008,0005) "Specific Character Set" if this attribute is defined in the DICOM SOP class used by
395 the IHE transaction. This attribute value specifies the ISO 8859-1 (Latin 1) character set.

4.4 HL7: Support for ISO Latin 1

All actors with HL7 based transactions shall support the value "8859/1" for the field "MSH-18 Character Set" in the MSH segment. This value specifies the printable characters from the ISO 8859-1 (Latin 1) character set (see Table 0211 in HL7 Appendix A).

400 ## 4.5 HL7: German Semantics

The semantics (i.e., names) of the HL7 fields shall be used as defined in the German HL7 edition 2.3.1d published by the German HL7 Chapter (HL7-Benutzergruppe in Deutschland e. V., http://www.hl7.de/). In particular, the use of the following field deviates from the U.S. HL7 specification:

405 **Table 4.5-1:**

Field	HL7 USA Semantics	HL7 Germany Semantics
PID-27	Veteran Military Status	Beruf/Tätigkeit des Patienten (Patient's Profession/Occupation)

4.6 HL7: PID-18 "Patient Account Number" and PV1-19 "Visit Number"

Field PV1-19 "Visit Number" is required and shall be used to transmit the patient admission identifier ("Fallnummer"). *Field PID-18 "Patient Account Number"* is used to consolidate
410   information relative to several visits and is generally not used in Germany.

4.7 Change PV1-8 "Referring Doctor" to Type R2 in all PV1 Segments

Volume 2, Sections 4.1.4.1.2.4, 4.2.4.1.2.3, 4.4.4.1.2.3 and 4.12.4.2.2.4

In Volume 2, sections 4.1.4.1.2.4, 4.2.4.1.2.3, 4.4.4.1.2.3 and 4.12.4.2.2.4 of the Technical Framework, the optionality of *field PV1-8, Referring Doctor*, is C: Conditional. Clinical
415   situations have been identified in which an ORM message is sent for an outpatient, but the Referring Doctor is unknown and, therefore, field PV1-8 cannot be valued. In particular this affects the treatment of emergency outpatients in the German healthcare system.

Therefore, the optionality of *field PV1-8, Referring Doctor* shall be changed to R2, meaning that f*ield PV1-8 "Referring Doctor"* shall always be sent when a message contains the PV1 segment
420   and the sending application has data for the field. It may be present otherwise. This change affects the following IHE transactions: Patient Registration, Placer and Filler Order Management, Procedure Scheduled and Patient Update.

Tables 4.1-3, 4.2-2, 4.4-2 and 4.12-4 and explanations following shall be modified as shown:

425   **Table 4.7-1: Modifications to PV1-8**

SEQ	LEN	DT	OPT	TBL#	ITEM#	ELEMENT NAME
. . .						
8	60	XCN	R2	0010	00138	Referring Doctor
. . .						

. . .

Field *PV1-8 Referring Doctor* shall be valued when a procedure is scheduled for an outpatient, and the sending application has data for the field. It may be present otherwise.

4.8 HL7: ZBE Segment in ADT

430   The ZBE segment is an HL7 extension defined by the German Chapter of HL7. It introduces a field called "Movement ID" which allows, upon the reception of a change message (e. g. ADT^A08), to exactly determine the original message (ADT^A01, ADT^A02) to which the change is related. The following table contains an English translation of the original ZBE definition table which is part of the German HL7, edition 2.3.1d and available online at
435   http://www.hl7.de/zregister/zbeweg.html.

Table 4.8-1: Translation of IHE-Germany ZBE Table

SEQ	LEN	DT	OPT	RP/#	TBL #	ITEM#	ELEMENT NAME
1		EI	R	Y		49071	Movement ID
2		TS	O			49072	Start of Movement Date/Time
3		TS	O			49073	End of Movement Date/Time
4		ST	O			49074	Reason for Triggering the Movement / Processing Identifier ("INSERT", "UPDATE", "DELETE")

440 The use of this Z-segment is optional, but allowed and recommended in IHE-D for all ADT messages.

Note: It is the intention of the IHE-D working group to declare support of the ZBE segment mandatory for all ADT messages sent by an ADT actor in a future version of the German Technical Framework Addendum. Implementations of an ADT actor according to this Technical
445 *Framework Addendum are strongly recommended to support the ZBE segment.*

5 National Extensions for IHE United States

The national extensions documented in this section shall be used in conjunction with the definitions of integration profiles, actors and transactions provided in volumes 1-3 of the IHE Technical Framework. This section includes extensions and restrictions to effectively support the regional practice of healthcare in the U.S.A.

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5.1 PID Segment

In the US, *PID-18 Patient Account Number* must be valued and *PV1-19 Visit Number* is required when PID-18 identifies an account that spans more than one encounter or visit.

6   National Extensions for IHE Italy

The national extensions documented in this section shall be used in conjunction with the definitions of integration profiles, actors and transactions provided in volumes 1-3 of the IHE Technical framework. This section includes extensions and restrictions to effectively support the regional practice of healthcare in Italy. It also translates a number of English terms to ensure correct interpretation of requirements of the Technical Framework..

6.1 Comments

This national extension document was authored under the sponsorship and supervision of SIRM, welcome comments on this document and the IHE Italy initiative. They should be directed to the National Project Manager:

> Claudio Saccavini
> IHE-Italy project manager
> Email: csaccavini@rad.unipd.it

6.2 IHE-I 2003 Scope

The extensions, restrictions and translations specified apply to the following IHE Integration profiles:

- Scheduled Workflow
- Patient Reconciliation
- Consistent Presentation of Images
- Key Image Notes
- Simple Image and Numerical Report
- Access to Radiology Information
- Basic Security

6.3 Extended DICOM Character Sets

The support of accented characters is required for all actors with DICOM-based transactions. The Specific Character Set (0008,0005) Attribute shall contain the value "ISO_IR 100" in order to select ISO 8859/1 Latin-1 characters.

6.4 Extended HL7 Character Set

The support of accented characters is required for all actors with HL7 based transactions. The Field MSH 18 shall contain the value "8859/1" in order to select the ISO 8859 Latin-1 characters.

6.5 Translation of specific Fields of the PID Segment

The table below provides the translation of specific fields of the PID Segment:
La tabella sotto riporta la traduzione di alcunicampi specfici del segmento PID:

490 **Table 6.5-1: Translation of PID Segment Fields**

Campo (Field)	Traduzione/Traduction
Patient Identifier List (PID 3)	Identificativivo univoco del paziente all'interno della singola struttura sanitaria. Normalmente può essere il codice sanitario
Legal Name (PID 5)	Cognome e Nome del paziente. Nel caso delle donne sposate non si utilizza ma il cognome del marito.
Maiden Name (PID 5)	Campo non utilizzato in Italia
SSN Number Patient (PID 19)	Numero della tessera sanitaria del Servizio Sanitario Nazionale della Regione di Residenza del paziente.
Patient Account Number (PID 18)	Codice Fiscale del Paziente
Campo (Field)	Traduzione/Traduction

6.6 Syntax Rules for PID-11 (Patient Address)

The ZIP or Postal Code will contain the "code postal".
Il "ZIP or Postal Code" dovrà contenere il Codice di Avviamento Postale.

6.7 Translations of PV1-19, Visit Number

495 This number corresponds to physical visit of the patient into the hospital.
Questo numero corrisponde al numero di ricovero per i pazienti interni, o al numero di richiesta nel caso di pazienti esterni.

6.8 Extensions of PV1-2 (Patient Class)

We introduce three new types of Patient Class, the Day Hospital, the After Dismission and the
500 Protected Dismission.
Sono stati introdotte tre nuove classi di paziente: il Day Hospital, il Post-Ricovero e la Dimissione Protetta.

Table 6.8-1: Translation of PV1-2 Segment Fields Patient Class

Value	Description	Translation/Traduzione
E	Emergency	Paziente proveniente dal Pronto Soccorso
I	Inpatient	Paziente in Ricovero Ordinario
O	Outpatient	Paziente Esterno o Ambulatoriale
P	Preadmit	Paziente in Ricovero Programmato
R	Recurring Patient	Paziente con ricovero che prevede cicli di cura

Value	Description	Translation/Traduzione
B	Obstetrics	Valore non utilizzato in Italia
D	Day Hospital	Paziente in regime di ricovero giornaliero
C	After Dismission	Paziente in regime di prestazioni di post-ricovero
X	Protected Dismission	Paziente in regime di Dimissione Protetta

6.9 Patient Account Number

Field PID-18 Patient Account Number is a required field in IHE Italy.
Il Campo PID-18 Patient Account Number è obbligatorio per IHE-Italy

6.10 Extension and Translations of Physician Types in PV1

The table below includes the translations of the PV1 Physician Types:
La tabella sotto riportata fornisce l'interpretazione dei Tipi Medici:

Table 6.10-1: Translation of Physician Types in PV1

Campo (Field)	Traduzione/Translaction
PV1-7Attending doctor	Medico responsabile della cura del paziente durante il ricovero, il medico di medicina generale nel caso di un paziente esterno o ambulatoriale
PV1-8Referring doctor	Il medico che richiede la consulenza e che è indicato come il destinatario della risposta dello specialista.
PV1-9Consulting doctor	Il medico che esegue la consulenza richiesta dal Referring Doctor
PV1-17 Admitting doctor	Il medico che decide il ricovero del paziente

7   National Extensions for IHE United Kingdom

7.1   Introduction

515   This Appendix to the IHE Technical Framework document shall be used in conjunction with the Integration profiles defined in the body of the IHE Technical Framework, Revision 5.5. This document includes provisions that must be implemented by UK participants in the European Connectathon to be held in 2003.

7.2   Scope

520   The extensions, restrictions and translations specified apply to the following IHE Integration Profiles:

- Scheduled Workflow
- Patient Reconciliation
- Consistent Presentation of Images

525   7.3   HL7: PID-18 "Patient Account Number"

Field PID-18 "Patient Account Number "is not supported in the UK (i.e. ignored).

7.4   HL7: PV1-19 "Visit Number"

Field PV1-19 "Visit Number" shall contain a locally unique patient admission identifier (Enterprise Visit Identifier).

530   7.5   HL7: PV1-8 "Referring Doctor"

Field PV1-8 "Referring Doctor" shall always be sent when a message contains the PV1 segment.

Note: In the Technical Framework, rev. 5.5, PV1-8 is only required for ADT^A04 messages.

Note: In HL7 UK standard this field is optional

The table below shows PV1 Field Physician Types as given in IHE France specifics:

535

Field	Description
PV1-7 Attending doctor:	The person primarily responsible for the care of the patient during a particular healthcare visit (generally used for inpatient events, but could be extended to an outpatient visit as well.)
PV1-8 Referring doctor:	Is any physician who referred the patient to the care of another physician (generally a specialist) for a particular visit. The referring physician might be noted in an HL7 event so that she/he receives a copy of any test results or documentation of care.
PV1-9 Consulting doctor:	Is generally a specialist who sees a patient as the result of a referral or a consultation order. She/he is not the attending physician for the case, although that status could be transferred to a consulting physician at some point.

Field	Description
PV1-17 Admitting doctor	Is the physician who decides that a patient meets the criteria for an inpatient admission to a hospital during a specific visit. The admitting physician is responsible for evaluating the patient so that their acuity satisfies admission criteria.

7.6 DICOM: Support for ISO Latin 1

All actors with DICOM based transactions shall support the value "ISO_IR 100" for the attribute (0008,0005) "Specific Character Set" if this attribute is defined in the DICOM SOP class used by
540 the IHE transaction. This attribute value specifies the ISO 8859-1 (Latin 1) character set.

Note: this character set supports the Welsh language

7.7 HL7: Support for ISO Latin 1

All actors with HL7 based transactions shall support the value "8859/1" for the field "MSH-18 Character Set" in the MSH segment. This value specifies the printable characters from the ISO
545 8859-1 (Latin 1) character set (see Table 0211 in HL7 Appendix A).

Note: this character set supports the Welsh language

8   National Extensions for IHE Canada

The national extensions documented in this section shall be used in conjunction with the definitions of integration profiles, actors and transactions provided in volumes 1-3 of the IHE Technical Framework. This section includes extensions and restrictions to effectively support the regional practice of healthcare in Canada. It also translates to French a number of English terms to ensure correct interpretation of requirements of the Technical Framework.

8.1   Comments

This national extension document was authored by the Radiology committee of IHE Canada. Comments and suggestions should be sent to:

> Alain Gauvin, David Heaney, David Koff (co-chair) or Rita Noumeir (co-chair)
>
> Email: Alain.Gauvin@muhc.mcgill.ca , David.Heaney@mckesson.com , David.Koff@sw.ca or rnoumeir@ele.etsmtl.ca

The extensions, restrictions and translations specified apply to the radiology technical framework of IHE.

8.2   Extended DICOM Character Sets

The support of accented characters is required for all actors with DICOM-based transactions. The Specific Character Set (0008,0005) Attribute shall contain the value "ISO_IR 100" in order to select ISO 8859/1 Latin-1 characters.

8.3   Extended HL7 Character set

The support of accented characters is required for all actors with HL7 based transactions. The Field MSH 18 shall contain the value "8859/1" in order to select the ISO 8859 Latin-1 characters.

8.4   Translation of Specific Fields of the PID Segment

The table below provides the translation of specific fields of the PID Segment:

La table ci-dessous fournit la traduction de champs spécifiques du segment PID.

Table 8.4-1: Translation of PID Segment Fields or component values

Champ (Field)	Interprétation/Traduction
Patient Identifier List (PID – 3)	Numéro de dossier
Legal Name (in table 0200 for name type in PID – 5)	Nom de famille
Maiden Name (in table 0200 for name type in PID – 5)	Nom de fille
Display Name (in table 0200 for name type in PID – 5)	Nom usuel
SSN Number Patient (PID – 19) This is the personal	Numéro de Sécurité Social du patient.

Champ (Field)	Interprétation/Traduction
social security number of the patient which may not be the social security number used for the insurance billing payment.	
Patient Account Number (PID – 18) Unique identifier for collecting and grouping all elements necessary for charging AND / OR the transmission to the insurance company for charging.	Numéro de compte patient Numéro unique qui permet de collecter et de grouper tous les éléments nécessaires à la facturation ET / OU à la transmission vers les organismes d'assurances et mutuelles, pour prise en charge

8.5 Syntax Rules for PID-5 (Patient Name)

575   Last name prefix (<family name (ST) & <last_name_prefix (ST)>) will be used for names with « particule ». Prefix sera utilisé pour la particule des noms à particules.

8.6 Extensions of PID-16 (Marital Status)

One value, G for Living Together shall be added to the The Marital Status table 002 of HL7 2.3.1 (User defined table).

580   Note: The value G has been obtained from HL7 2.4.

Table 8.6-1: Translation of PID-16, Marital Status

Valeur	Description	Interprétation/Traduction
A	Separated	**Séparé**
D	Divorced	**Divorcé**
M	Married	**Marié**
S	Single	**Célibataire**
W	Widowed	**Veuf/Veuve**
G	Living together	**Concubin**

8.7 Translations of PV1-2 (Patient Class) and Selection of Values

The value 'D', for 'Day hospital' or 'Hospitalisation d'un jour' shall be added to the table 0004.

585 8.8 Visit number usage and interpretation

PV1-19 (Visit Number) is an identifier for the visit or consult episode.

If Field PV1-2 is « I » Inpatient then PV1-19 is interpreted as visit number, or n° de séjour.

If Field PV1-2 is « D » Day Patient then PV1-19 is interpreted as visit number, or n° de séjour.

If Field PV1-2 is « O » Outpatient then PV1-19 is interpreted as consult number, or n° de
590   consultation.

If Field PV1-2 is « R » Recurring Inpatient then PV1-19 is interpreted as session number, or n° de séance.

8.9 Extension and Translations of Physician Types in PV1

The optionality status of PV1-8 is R for the Canadian implementation.

595   The table below includes the translations of the PV1 Physician Types:

La table ci-dessous fournit la traduction de champs relatif aux types de médecins dans PV1:

Table 8.9-1: Translation of PV1 Physician Types

Field	Description	Interprétation/Traduction
PV1-7 Attending doctor:	The person primarily responsible for the care of the patient during a particular health care visit (generally used for inpatient events, but could be extended to an outpatient visit as well.)	Médecin traitant.
PV1-8 Referring doctor	Is any physician who referred the patient to the care of another physician (generally a specialist) for a particular visit. The referring physician might be noted in an HL7 event so that she/he receives a copy of any test results or documentation of care.	Médecin référant.
PV1-9 Consulting doctor	Is generally a specialist who sees a patient as the result of a referral or a consultation order. She/he is not the attending physician for the case, although that status could be transferred to a consulting physician at some point.	Le médecin qui est consulté pour un deuxième avis.
PV1-17 Admitting doctor	Is the physician who decides that a patient meets the criteria for an inpatient admission to a hospital during a specific visit. The admitting physician is responsible for evaluating the patient so that their acuity satisfies admission criteria.	Médecin responsable de l'admission.

9 National Extensions for IHE Spain

600 The national extensions documented in this section shall be used in conjunction with the definitions of integration profiles, actors and transactions provided in volumes 1-3 of the IHE Technical Framework. This section includes extensions and restrictions to effectively support the regional practice of healthcare in Spain. IHE Spain provides a translation tool to ensure correct interpretation of requirements of the Technical Framework (see www.ihe-e.org).

9.1 Comments

605 IHE-Spain (from now on IHE-E) welcomes comments on this document and the IHE Spain initiative. Comments can be directed to the IHE-E technical manager, following the links of the IHE-E web site: www.ihe-e.org.

9.2 IHE-E: Scope of 2007's National Extension

610 The extensions, restrictions and translations specified apply to HL7 and DICOM requirements as used in IHE integration profiles: such as Scheduled Workflow.

9.3 1.3 IHE-E: Translation of IHE terms into Spanish

A JAVA tool has been developed to support the translation of the main IHE terms into Spanish. This tool provides a dictionary that contains integration profiles, actors and transactions, and for
615 each one, the domain/TF document where they are referenced (if applicable), acronym, the translation of the term into Spanish, and a short description.

The last version of this JAVA tool can be downloaded from the web site of the Spanish IHE initiative (www.ihe-e.org).

9.4 Support for ISO Latin 1

620 **9.4.1 HL7**

All actors with HL7 based transactions shall support the value "8859/1" for the field "MSH-18 Character Set" in the MSH segment. This value specifies the printable characters from the ISO 8859 (Latin 1) character set.

Note: this character set supports all languages which are official in Spain.

625 **9.4.2 DICOM**

All actors with DICOM based transactions shall support the value "ISO_IR_100" for the attribute (0008, 0005) "Specific Character Set" if this attribute is defined in the DICOM SOP class used by the IHE transaction. This attribute specifies the ISO 8859-1 (Latin 1) character set.

Note: this character set supports all languages which are official in Spain.

630 ## 9.5 Patient Identification Data

This section is intended to give an orientation in the use of the main attributes related to the patient entity and which can be subject to an ambiguous interpretation. Likewise, we will focus in the use or adoption or codifications that allow a higher interoperability between systems.

9.5.1 Spanish naming convention: the second family name

635 In Spain, people use two family names. In this document they will be referred to as the first family name and the second family name. The first family name is the father's first family name and the second family name is the mother's first family name.

For instance, Picasso is known for his second family name. His real name was Pablo Ruiz Picasso, son of José Ruiz Blasco, and Maria Picasso Lopez.

640 Another example useful for non-Spanish readers: The daughter of the actors Antonio Banderas and Melanie Griffith is named Estela Banderas Griffith.

Note that, as women in Spain don't change names when they get married, a person's second family name is as well his/her mother's maiden name.

The patient's second family name is an essential attribute for a person's identification in Spain.
645 However, if a person is not of Spanish descent, it is possible that he or she does not have a second family name

Handling particles

It is quite common in Spain that names have particles. Some examples of this are Felipe de Borbon y Grecia or Teresa Garcia de la Vega. These particles are not handled consistently across
650 hospitals (or other information systems) and its codification is beyond the scope of this national extension. Common solutions are either adding de particle at the end of the name (|BORBON>Y GRECIA^FELIPE DE|) or before the surname (|DE BORBON>Y GRECIA^FELIPE)|

9.5.2 HL7

Most of the identification data of a patient are specified in the PID segment as described in the
655 table below (Table 1. PID attributes, HL7 version 2.3.1. Chapter 3, section 3.4.2)

Table 9.5.2-1: IHE profile –PID Segment

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM #	ELEMENT NAME
1	4	SI	O			00104	Set ID – PID
2	20	CX	B			00105	Patient ID
3	20	CX	R	Y		00106	Patient Identifier List
4	20	CX	B	Y		00107	Alternate Patient ID – PID
5	48	XPN	R	Y		00108	Patient Name
6	48	XPN	O	Y		00109	Mother's Maiden Name

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM #	ELEMENT NAME
7	26	TS	O			00110	Date/Time of Birth
8	1	IS	O		0001	00111	Sex
9	48	XPN	O	Y		00112	Patient Alias
10	80	CE	O	Y	0005	00113	Race
11	106	XAD	O	Y		00114	Patient Address
12	4	IS	B		0289	00115	County Code
13	40	XTN	O	Y		00116	Phone Number – Home
14	40	XTN	O	Y		00117	Phone Number – Business
15	60	CE	O		0296	00118	Primary Language
16	80	CE	O		0002	00119	Marital Status
17	80	CE	O		0006	00120	Religion
18	20	CX	O			00121	Patient Account Number
19	16	ST	B			00122	SSN Number – Patient
20	25	DLN	O			00123	Driver's License Number - Patient
21	20	CX	O	Y		00124	Mother's Identifier
22	80	CE	O	Y	0189	00125	Ethnic Group
23	60	ST	O			00126	Birth Place
24	1	ID	O		0136	00127	Multiple Birth Indicator
25	2	NM	O			00128	Birth Order
26	80	CE	O	Y	0171	00129	Citizenship
27	60	CE	O		0172	00130	Veterans Military Status
28	80	CE	O		0212	00739	Nationality
29	26	TS	O			00740	Patient Death Date and Time
30	1	ID	O		0136	00741	Patient Death Indicator

Adapted from the HL7 Standard, version 2.3.1

660   **9.5.2.1 Second family name**

Patient's second family name

Amongst the fields defined for the PID segment, there is no specific location for the second family name. In most current implementations, the field selected to convey this information is PID-6 Mother's Maiden Name (XPN). This is a composed data type, whose description 665   according to HL7 v2.3.1 is the following:

XPN Components: <family name (ST)> & <last_name_prefix (ST)> ^ <given name (ST)> ^ <middle initial or name (ST)> ^ <suffix (e.g., JR or III) (ST)> ^ <prefix (e.g., DR) (ST)> ^ <degree (e.g., MD) (IS)> ^ <name type code (ID) > ^ <name representation code (ID)>

The second name shall be positioned in the following XPN route:

670   PID-6 Mother's maiden name → Family Name

However, this solution can't be extended to reporting other second family names, i.e. attending doctor. To achieve a rule that is consistent for reporting second family names of all person's involved, it is suggested that the second family name is coded as a subcomponent of the patient's family name as well.

675   Therefore the component <family name (ST)> can have two parts the first family name and the second family name, separated by a >, as shown in the following example:

|BANDERAS>GRIFFITH^ESTELA|

As people who are not Spanish descendants may not have second family name this field PID-6 is not required to be filled.

680

Professional's second family name

The second family name is used for any persons, including patients. An example can be the name of the physician visiting a patient (i.e. PV1 9, Consulting Doctor XCN).

In HL7 v2.3.1 a subcomponent of the family name component can be used in the same way is
685   done for the patient name.

In v2.5 the definition for XCN data type is changed, and it is recommended to place both patient and professional names of XCN fields such as "Consulting Doctor", in the following XCN route:

 "Field x" →Second and Further Given Names or Initials Thereof

9.5.2.2 Patient Identifiers

690   The identifier associated to a patient shall be located in the PID-3 Patient Identifier List field.

According to HL7 v2.3.1 the patient identifier list is defined as follows.

```
PID-3 Patient identifier list (CX)  00106

    Components:  <ID (ST)> ^ <check digit (ST)> ^ <code identifying the check
        digit scheme employed (ID)> ^ <assigning authority (HD)> ^
695         <identifier type code (IS)> ^ <assigning facility (HD)>

    Subcomponents of assigning authority: <namespace ID (IS)> & <universal ID
        (ST)> & <universal ID type (ID)>

    Subcomponents of assigning facility:  <namespace ID (IS)> & <universal ID
        (ST)> & <universal ID type (ID)>
```
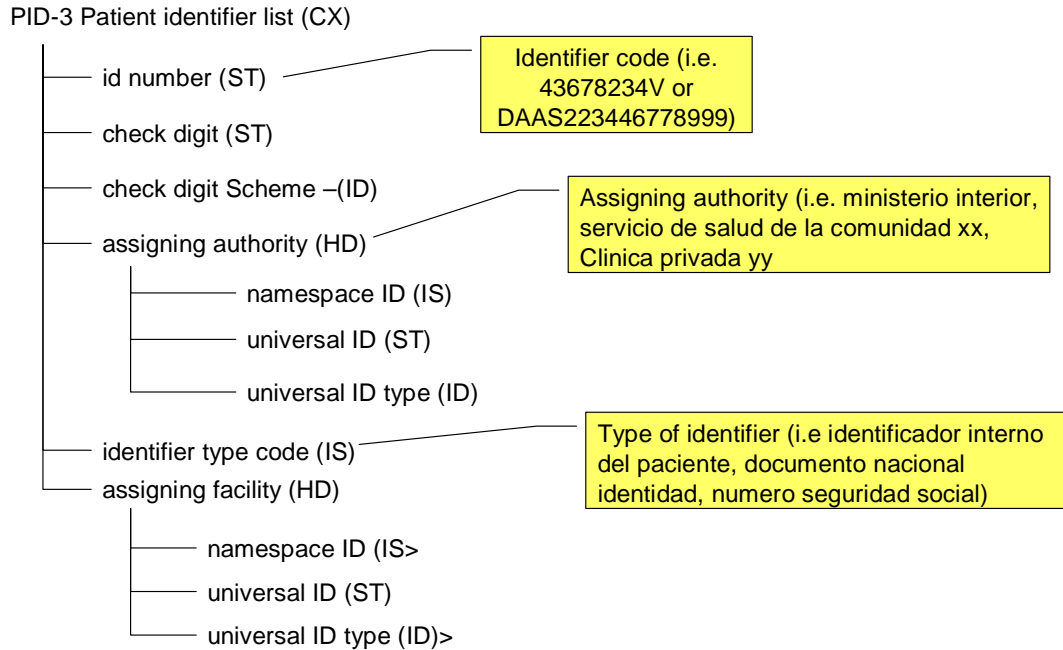
700   This is a mixed type that allows great flexibility of use due to its subcomponents. With the goal of simplifying the patient identifier's management, the use of the components shown in Table 2 is required.

Table 9.5.2-2: HL7 v2.3.1 PID-3

705

PID-3 Patient identifier list (CX)

— id number (ST) ——— Identifier code (i.e. 43678234V or DAAS223446778999)

— check digit (ST)

— check digit Scheme –(ID)

— assigning authority (HD) ——— Assigning authority (i.e. ministerio interior, servicio de salud de la comunidad xx, Clinica privada yy

  — namespace ID (IS)

  — universal ID (ST)

  — universal ID type (ID)

— identifier type code (IS) ——— Type of identifier (i.e identificador interno del paciente, documento nacional identad, numero seguridad social)

— assigning facility (HD)

  — namespace ID (IS>

  — universal ID (ST)

  — universal ID type (ID)>

There are many approaches for the management of these identifiers (for more details in other possible strategies see [1]). The technical subcommittee has decided to use specific values for assigning authorities and identifier type codes. These are summarized in Table 3. The last
710   column, assigning jurisdiction is a field added in v2.5, and is shown here only as a recommendation for future v2.5 implementations.

Table 9.5.2-3: Spain's local codes for HL7 v2.3.1 PID-3, assigning authority fields

Description			Codes to be used	
Identifier (Spanish name)	Identifier (English description)	Assigning Authority	Identifier Type Code	Assigning Jurisdiction (recommendation for V2.5)
DNI	National identify card	NamespaceID: MI	NNESP[1]	Identifier ESP[2] Name of Coding System: ISO3166 (3 char)
Pasaporte	Passport	NamespaceID: MI	PPN	Identifier ESP[2] Name of

[1] The last 3 characters correspond to the ISO3166 code (3 characters) of the country that issues the document. See reference [6].

[2] This applies only for Spain. For other countries, their ISO codification should be taken into.

Description			Codes to be used	
Identifier (Spanish name)	Identifier (English description)	Assigning Authority	Identifier Type Code	Assigning Jurisdiction (recommendation for V2.5)
				Coding System: ISO3166 (3 char)
Trajeta residencia	Spanish identity card for foreigners resident in Spain	NamespaceID: MI	PRC	Identifier: ESP[2] Name of Coding System: ISO3166 (3 char)
Número afiliación Seguridad Social	Social Security id	NamespaceID: SS	SS	Identifier: ESP Name of Coding System: ISO3166 (3 char)
CIP autonómico	Regional authority unique patient identifier	NamespaceID:CAXX[3]	JHN	Identifier: AN, AR, .. Name of Coding System: ISO3166-2[4]
CIP del SNS	National health authority unique patient identifier	Namespace ID: MS	HC	Identifier: ESP Name of Coding System: ISO3166 (3 char)
CIP europeo	European patient identifier	NamespaceID: TSE	HC	Identifier: EU Name of Coding System: ISO3166
ID interno	Internal patient identifier	Definition pending	PI	Definition pending

715   9.5.2.3 Contact Data

For the contact data (mail, telephone, etc.) the use of PID-13 Phone Number – Home shall be used. This field is of the type XTN (extended telecommunication number data type)

The following fields shall be used:

- *phone number* (NM): this field contains the telephone number (without country code)

720
- *telecommunication use code*: in this field the values suggested in the HL7 0201 table shall be used.

- *telecommunication equipment type*: in this field, the values suggested in the HL7 0202 shall be used.

- *country code*: the international code for Spain, +34, is optional. Foreign international

725   codes shall be filled in.

9.5.2.4 Address Data

The field used in the PID segment to store the possible addresses of the patient is PID-11 Patient Address.

---

[3] The ISO code should be replaced with the regional authority ("Comunidad autonoma" - CA) ISO (see following note). See reference [5] for autonomous regions codification.

[4] ISO regional authority (CCAA) Codification. See reference [5].

```
         Components:  <street address (ST)> ^ <other designation (ST)> ^ <city
730          (ST)> ^ <state or province (ST)> ^ <zip or postal code(ST)> ^
             <country (ID)> ^ < address type (ID)> ^ <other geographic
             designation (ST)> ^ <county/parish code (IS)> ^ <census tract (IS)>
             ^ <address representation code (ID)>
```

To identify the type of address, it is recommended that the values from the HL7 table 0190 be
735 used in the following way:

Table 9.5.2-4: Spain's recommended local codes for address type

Type of address	"Address Type" Field
Fiscal (tax)	L
Empadronamiento (city register)	H
Contacto (contact)	M
Empresa (company)	B
Desplazado (temporal)	C

In the event that the "address type" is not filled in, the address is considered to be the city
740 register's postal address (H).

The components of the address field are recommended to be used as follows:

Table 9.5.2-5: Spain's recommended interpretation for HL7 v.2.3.1 PID-11 components.

PID-11 component	Recommended interpretation	Recommended coding scheme
"Street Address"	Tipo de vía, nombre de la vía y número de la vía	n/a
"City":	Municipio	INE code[5]
"State or Province":	Provincia	INE code[5]
"Zip or postal code"	Código Postal	
"Country"	País	ISO3166 (3 characters)
"Other geographic designation"	Población[6]	n/a

745 In version 2.5 the street address component is modified to include a set of subfields. The
recommendation for future v2.5 implementations is:

---

[5] Spain's recommended interpretation for HL7 v.2.3.1 PID-11 components.

[6] Only used in case that the name of the city does not match the name of the INE codified district.

34

Table 9.5.2-6: Spain's recommended interpretation for HL7 v.2.5 PID-11 Street address subfields.

Subfields of "Street Address" component	Recommended interpretation
"Street or mailing address"	Tipo de vía
"Street name"	Nombre de la vía
"Dwelling number"	Número de la vía

750

9.5.3 DICOM: Patient Identification Module

The DICOM Standard provides definitions for the information objects [9]. Most of the identification data of a patient are specified in the Patient Modules. (DICOM 2007 PS 3.3. Patient Identification Module). Patient Identification Attributes are summarized in DICOM 2007

755 PS 3.3. Table C.2-2.

9.5.3.1 Second family name

Attribute Patient's Name (0010, 0010) has a value representation ([10] 6.2. Value Representation, VR) of person name (PN), which does not allow to distinguish [11] between the first and the second family name.

760 Amongst the patient's personal data fields available in the Patient Identification Modules, there is as well no specific location for the second family name.

Therefore, it is recommended that the first and second family names are placed in the first component of PN, family name, in the above mentioned order, using the character ">" (ANSI 003E hex) as delimiter.

765

Other Patient Name (0010,1001) attribute was not chosen to specify second family name because there are other Names in the system such as the Referring Physician which can be encoded in the same way.

770 Other examples besides the Referring Physician's Name (0008, 0090), are Performing Physician's Name (0008, 1050), Name of Physician's Reading Study (0008, 1060), Operator's Name (0008, 1070), Names of Intended Recipients of Results (0040,1010), Order Entered By (0040,2008), Human Performer's Name (0040,4037), Verifying Observer Name (0040,A075), Content Creator's Name (0070,0084), Reviewer Name (300E,0008), Interpretation Recorder

775 (4008,0102), and Interpretation Transcriber (4008,010A).

9.5.3.2 Patient Identifiers

The main patient identifier shall be reported in:

    (0010, 0020)   "Patient ID"

(0010, 0021)   "Issuer of Patient ID" (Corresponds to HL7 "Assigning authority",
780   see Table 3 for recommended codes)

In some cases the Assigning authority alone is not enough to ensure a unique interpretation of the patient id (see Table 3), and additional information regarding the "Identifier Type Code" is needed. This is supported in HL7 v2.3, but not in the current DICOM specification. Please note
785   that this issue may lead to errors if an assigning authority uses only the identifier type code to distinguish between the patient identifiers.

To code more than one patient identifier, the attribute (0010,1002) "Other Patient IDs Sequence" (PS 3.3 - 2007 Page 242) can be used.

9.6 Insurance Data

790   This section recommends a representation for insurance data. It focuses on the identification of the Insurance Company and does not cover the specific conditions of the insurance. This last aspect depends mainly on implementation and it goes beyond the aim of this national extension.

The proposal for the identification of the patient's main insurance data can be found in document [8].

9.6.1 HL7: Insurance Data Mapping

795   The following table (Table 8) describes the elements of the HL7 v2.3.1 IN1 segment (chapter 6, section 6.4.6) that shall be used and their recommended interpretation. Fields 1,2 and 3 are required according to HL7v2.3.1 definition.

IN1 segment should not be sent if the information in IN1-3 (Insurance company ID) is not
800   relevant.

Table 9.6.1-1: Spain's recommended interpretation for HL7 v.2.3.1 IN1

IN1 Field	Recommended interpretation	Optionality
In1-1 Set id IN1	Number that identifies the transaction. If the patient has more than one insurance company, the message shall be repeated for each company, using a different transaction ID.	Required
In1-2 Insurance Plan ID	Coverage Plan identifier.	Required
In1-3 Insurance Company ID	Unique company identifier.	Required
In1-4 Insurance Company Name	Name of the company. We suggest repeated use of this field to identify the name of the company's delegation.	Optional
In1-12 Plan effective date	The date the Coverage Plan comes into force.	Optional

IN1 Field	Recommended interpretation	Optionality
In1-13 Plan expiration date	The date the Coverage Plan finishes.	Optional
In1-36 Policy Number	Policy number.	Optional

9.7 Examples

805 ### 9.7.1 HL7 Example 1

The first example provided is the PID information of a patient living in the Extremadura region. Only information addressed within this document is shown.

Datos del paciente	Patient data	
Nombre	Name	Manuel
Primer Apellido	First family name	Fernández
Segundo Apellido	Second family name	Ferrer
Identificadores	Identifiers	
DNI	National identity card	37456765V
CIP autonómico	Regional authority unique patient identifier	CAEX123456789088 (extremadura =EX)
Número afiliación Seguridad Social	Social Security id	061081880847
Identificador interno del HIS	Internal patient id at the HIS	9987765
Datos de contacto	Contact information	
Teléfono de casa	Home phone	924678564
Móvil	Cell phone	659877877
Correo electrónico	e-mail	mfernandez@hl7spain.org
Direcciones	Adresses	
Dirección de empadronamiento	Address for the city register	
Tipo de vía	Street type (avenue, square,..)	Avenida
Nombre de la vía	Street name	Alange
Número	Street number	8
Piso	Floor	4ª-3ª
Escalera	Stair	B
Código Postal	Zip code	06800
Municipio	City	Mérida
Población	City	Mérida
Provincia	Province	Badajoz
País	*Country*	España
Dirección de contacto	Contact address	
Tipo de vía	Street type	Calle
Nombre de la vía	Street name	Constitución
Número	Street number	34
Piso	Floor	1º-C
Escalera	Stair	
Código Postal	Zip code	06800
Municipio	City	Mérida
Población	City	Mérida

Provincia	Province		Badajoz
País	Country		España

810   The location of these data in an HL7 message would be the following:

PID-3 Patient identifier List	ID Number		37456765V
	Assigning Authoriy		
		Namespace ID	MI
	Identifier Type Code		NNESP
	ID Number		CAEX123456789088
	Assigning Authoriy		
		Namespace ID	CAEX
	Identifier Type Code		JHN
	ID Number		61081880847
	Assigning Authoriy		
		Namespace ID	SS
	Identifier Type Code		SS
	ID Number		9987765
	Assigning Authoriy		
		Namespace ID	HC
	Identifier Type Code		PI
PID-5 Patient Name	Family Name		
		Surname	Fernández
	Given Name		Manuel
PID-6 Mother's Maiden Name	Family Name		
		Surname	Ferrer
	Given Name		
PID-11 Patient Address	Street Address		Avenida Alange 8 4º-3ª Escalera B
	Other Designation		
	City		06083
	State or Province		06
	Zip or Postal Code		06800
	Country		ESP
	Address Type		H
	Other Geographic Designation		
	Street Address		Calle Constitución 34 1ª - C
	Other Designation		
	City		06083
	State or Province		06
	Zip or Postal Code		06800
	Country		ESP
	Address Type		M
	Other Geographic Designation		
PID-13 Phone Number - Home	Telecommunication Use Code		PRN
	Telecomm. Equipment Type		PH
	Country code		+34
	Phone Number		924678564
	Telecommunication Use Code		WPN
	Telecomm. Equipment Type		CP
	Country code		+34
	Phone Number		659877877
	Telecommunication Use Code		NET
	Telecomm. Equipment Type		Internet
	Email Address		mfernandez_f@ihe-e.org

And the corresponding PID segment in a message would be:

PID|

815   1|

37456765V^^^MI&&^NNESP^~
CAEX123456789088^^^CAEX&&^JHN^~
61081880847^^^SS&&^SS^~
9987765^^^HC&&^PI^~||
820   FERNANDEZ>FERRER^MANUEL|
FERRER||
F|||
Avenida Alange 8 4º-3ª Escalera B^^06083^06^06800^ESP^H^^^^~
Calle Constitución 34 1ª - C^^06083^06^06800^ESP^M^^^^||
825   ^PRN^PH^^^924678564~
^WPN^CP^^^659877877~
^NET Internet^^^mfernandez_f@ihe-e.org

9.7.2 HL7 Example 2

This example shows the data of a patient admitted in the Emergency Room of the "Hospital
830   Virgen de la Salud" at Toledo (Castilla La Mancha Region).

Datos del paciente	Patient data	
Nombre	Name	Estela
Primer Apellido	First family name	Banderas
Segundo Apellido	Second family name	Griffith
Fecha de nacimiento	Date of birth	June 1st, 1970
Identificadores	Identifiers	
DNI	National identity card	00000001R
CIP autonómico	Regional authority unique patient identifier	HOPN700641916019
Número afiliación Seguridad Social	Social Security id	2803800541502
Identificador interno del HIS	Internal patient id at the HIS	40004
Datos de contacto	Contact information	
Teléfono de casa	Home phone	925 123 456
Otro teléfono de contacto	Secondary contact telephone	925 654 321
Móvil	Cell phone	660 445 566
Correo electrónico	e-mail	
Direcciones	Adresses	
Dirección de contacto	Contact address	
Nombre de la vía	Street name	Plaza de Alfares 2 , Apt. 2º "A"
Código Postal	Zip code	45002
Municipio	City	Toledo
Población	City	
Provincia	Province	Toledo
País	Country	

The patient identifiers are coded as follows:

CIP autonomico	HOPN700641916019^^^CACM&&^JHN^
DNI	00000001R^^^MI&&^NNESP^
Identificador interno del HIS (Número de historia clínica)	40004^^^PI&&^

39

Número afiliación Seguridad Social   2803800541502^^^SS&&^SS^

835   The address is coded taking into account that the code for the city of TOLEDO is (45 1685) and the province of is TOLEDO(45) 45002 ESP M

Plaza de Alfares 2, Apt. 2º A^451685^45^45002^ ESP^M

The resulting patient identification segment (PID) is as follows:

840

PID|1|HOPN700641916019^^CACM&&^JHN^~
00000001R^^MI&&^NNESP^~
40004^^^PI&&^^^~
2803800541502^^SS&&^SS^^^~||
845   BANDERAS>GRIFFITH^ESTELA|
GRIFFITH|
19700601|
F|||
Plaza de Alfares 2 , Apt. 2º A^451685^45^45002^ ESP^M||
850   ^PRN^PH^^^925123456~
^ORN^PH^^^925654321~
^ORN^CP^^^660445566

9.7.3 DICOM Example 1

The patient information described in section 9.7.1 HL7 example 1 would be codified as follows
855   in DICOM.

TAG	Value
(0010,0010)	FERNANDEZ>FERRER^MANUEL
(0010,0020)	9987765
(0010,0021)	PEND
(0010,1002)	
(0010,0020)	CAEX123456789088
(0010,0021)	CAEX
(0010,0022)	TEXT
(0010,0020)	61081880847
(0010,0021)	SS
(0010,0022)	TEXT
(0010,0020)	37456765V
(0010,0021)	MI
(0010,0022)	TEXT

(0010,1040)	Avenida Alange 8 4º-3ª Escalera B
(0010,1060)	FERRER>
(0010,2150)	ESP
(0010,2152)	06083
(0010,2154)	+34924678564 / +34659877877

9.7.4 DICOM Example 2

860 The patient information described in section 1.7.2 HL7 example 2 would be codified as follows in DICOM.

TAG	Value -according to option 1
(0010,0010)	BANDERAS>GRIFFITH^ESTELA
(0010,0020)	40004
(0010,0021)	PEND
(0010,0022)	TEXT
>(0010,1002)	
>(0010,0020)	2803800541502
>(0010,0021)	SS
>(0010,0022)	TEXT
>(0010,0020)	00000001R
>(0010,0021)	MI
(0010,0022)	TEXT
(0010,1040)	Plaza de Alfares 2, Apt. 2º A
(0010,1060)	GRIFFITH
(0010,2150)	ESP
(0010,2152)	451685
(0010,2154)	+34925123456 / +34925654321 / +34660445566

9.8 References

865 [1] Proposal for Identifiers Management

(Technical Subcommittee HL7 Spain, http://www.hl7spain.org/)

[2] Minutes of Meeting – Technical Subcommittee ADT 03-02-2005

(Technical Subcommittee HL7 Spain, http://www.hl7spain.org/)

[3] Minutes of Conference Call Technical Subcommittee ADT 14-02-2005

870 (Technical Subcommittee HL7 Spain, http://www.hl7spain.org/)

[4] Minutes of Meeting Technical Subcommittee ADT 10-03-2005

(Technical Subcommittee HL7 Spain, http://www.hl7spain.org/)

[5] ISO Codification for Regions (autonomous regions) in Spain

(ISO, http://www.iso.org/iso/en/prods-services/iso3166ma/03updates-on-iso-3166/nli-4.pdf)

875   [6] ISO Codification for Countries

(ISO, http://www.iso.org/iso/en/prods-services/iso3166ma/02iso-3166-code-lists/iso_3166-1_decoding_table.html#EU)

[7] INE Codification for Districts and Provinces

(http://www.ine.es/inebase/cgi/um?M=%2Ft20%2Fe245%2Fcodmun&O=inebase&N=&L=0)

880   [8] Proposal for Insurance data associated with the patient

(Technical Subcommittee HL7 Spain, http://www.hl7spain.org/)

[9] DICOM 2007 Part 3: IOD, information Object Definitions

[10] DICOM 2007 Part 5, Data Structures and Encoding

[11] ANSI HISPP MSDS: COMMON DATA TYPES for Harmonization of Communications
885   Standards in Medical Informatics