Meeting MINUTES

DICOM WORKING GROUP SIX
(Base Standard)

Tuesday, Aug. 23-Friday, Aug. 26, 2011
Arlington, Virginia

Members Present	Represented by		M	T	W	T	F
Agfa Healthcare	Robert Horn			X	X	X	X
Carl Zeiss Medical Software	Tobias Kurzke				X	X	
DatCard Systems	Jere Darling			X	X	X	X
JIRA	Makoto Suzuki			X	X	X	X
Konica Minolta Med. Imaging	Michael Laconti			X	X	X	X
Merge Healthcare	Ronald Cowan			X	X	X	X
Philips Healthcare	Bas Revet			X	X	X	X
Toshiba Medical Research Institute USA	Kevin O'Donnell			X	X	X	X
Members Absent	**Voting Representative**						
* Burgert, Oliver	Oliver Burgert (Innovation Center Computer Assisted Surgery (ICCAS))						
CoreLabs	David Clunie			P	P	P	
*DeJarnette Research Systems	Fred Ganong						
GE Healthcare	Marie-Jose Lacroix						
Siemens Healthcare	Bjorn Nolte						
*Societe Francaise de Radiologie	Joel Chabriais						

Others Present	Affiliation		M	T	W	T	F
Behlen, Fred	ACR			X	X		
Horton, Mark	WG-09/Indian Health Service				X	X	
Keane, Roger	Laurel Bridge Software			X	X	X	X
Kanzaki, Masatoshi	WG-11-Real Vision				P	P	P
Koenig, Helmut	WG-20-Siemens			P			P
Lord, Elliot	Laurel Bridge Software			X	X	X	

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Lum, Flora	WG-09-AAO			P			
Maguire, Marilyn	WG-11-Fujifilm			X	X	X	X
Matsui, Norihisa	WG-11-Shimadzu				P	P	P
Schadt, Christof	WG-07/Brainlab			X	X	X	
Solomon, Harry	WG-26, etc/GE Healthcare			P			
Van Syckle, Don	WG-09/DVS Consulting				X	X	
Stephen Vastagh	MITA Staff						

(* = Does not count toward a quorum, P = Phone and/or web, X = Present)

Presiding Officer: Bas Revet, Chair

1. **Preliminary Events**

Participants identified themselves and their employers. The secretary reported that a quorum was present.

Members approved the agenda as modified by adding a Work Item Presentation on Thursday after the lunch break.

Members reviewed the minutes from the WG-06 meeting held in June 2011 and approved them with minor editorial changes.

2. **NEMA Staff Report**

Committee Secretary Stephen Vastagh reported on ballots that were distributed following the April and June 2011 meetings of WG-06. All ballots closed, all ballots met DICOM's quorum requirements.

BALLOT Closed	APPROVE	DISAPPROVE	ABSTAIN	COMMENTS
Sup152	22	1	8	5
CPack61	24	0	7	3
CPack62	20	1	10	5

3. **Letter Ballot Package #61-Comments**

All CPs listed below were included in Letter Ballot Package 61. That ballot closed, on June 10, 2011.

CP	Name
993	Specific Character Set in PPS N-SET
1041	Add 'Image Comments' to Four Measurements Objects
1042	Add Colors to Visual Acuity Background
1089	Clarify Use of ESC
1090	Allow Image IODs to Reference Multiple Irradiation Event UIDs
1091	Other Language Code Meanings Not Translations
1094	Hanging Protocol Range Selector Cannot Be Date or Time
1096	Correct Breed Codes
1097	CID 3829, 3839, 3840 Structure of Anatomy
1098	Clarify Behavior of HP Filter-by Operator If the Selected Attribute Value Is Absent
1099	Allow SCOORD on WSI Total Matrix
1100	Add Pericardial Effusion to Echo SR
1101	Acquisition Duration Units in Enhanced US
1102	Correct LOINC Code Meanings

1281

1103	Pixel Intensity Relationship LUT Number of Items
1104	Add Paddle Identification for Mammography
1107	No Human Readable Label for Irradiation Events in CT Dose SR
1113	Correct Lead III Code

Comments on CPack #61:

The following CP's were commented upon: 993, 1097, 1107.

CP-993-   Discussed the JIRA comment-added note in F.7.2.2.3.

The balance of the comments were accepted and changes made accordingly.

The WG-06 voted unanimously to approve, as final text, the CPs in CPack #61 as revised.

4. **Letter Ballot Package #62-Comments**

All CPs listed below were included in Letter Ballot Package 62. That ballot closed, on Aug. 8, 2011.

CP	Name
1064	Float VR in Numeric SR Content Items
1085	Clarify CT Acquisition Types
1109	Correct Figure Numbers in PS.3.3
1110	Encoding Undefined Length Empty Items and Sequences
1111	Correction Palette LUT Descriptor Description
1116	RT Image Higher Precision Current and Time
1117	Transform Inversion Correction
1118	Recorded Brachy Applicator Terms
1119	Registration Fiducials Reference Macro
1120	Source Distance in General Accessories
1121	Dose Scope Indicator
1122	Referenced Reference Image Sequence Tag
1124	Add Standard for DICOM Reference
1125	Add Protocol Name to SR Series
1128	Relax CR/LF Requirement in Part 5
1129	Correct Part 5 Rule on Group 0004 in Sequence
1130	Clarify Referenced Image Sequence Usage as Additional DICOMDIR Keys

Comments on CPack #62:

The following CP's were commented upon: 1064, 1110, 1111, 1120, 1128

CP-1128   Discussed the Siemens negative comment and decided to postpone discussion to the next
              meeting because there was no Siemens representative present at this meeting.

The balance of the comments were accepted and changes made accordingly.

The WG-06 voted unanimously to approve, as final text, the CPs in CPack #62 as revised, with the exception of CP-1128.

5. Change Proposals Approved to be included in Ballot Package #63 to be Issued

The group reviewed the CPs that were in the VP (Voting Package) coming into this meeting and after discussion and some slight modifications, members voted unanimously to include the following CPs in the next Letter Ballot, to be designated as **Ballot Package #63** for legal review and distribution for voting soon after this meeting.

CP	Name	Assigned to and/or Outcome
1095	Duplicate Exposure Time Codes	R. Horn
1131	Leaf Position Boundaries Clarification	U. Busch/WG-07
1132	High Dose Technique Type Clarification	U. Busch/WG-07
1133	RT ROI Identification Sequence Baseline CID Clarification	U. Busch/WG-07
1134	Correction of RT Ion Plan Module Table	U. Busch/WG-07
1135	Extensions of Pitch and Roll Attribute Description	U. Busch/WG-07
1136	Correct Channel Time Tag number	U. Busch/WG-07
1139	Part 16 VM 2-n	H. Solomon
1140	Part 16 Consistency Clean-up Annex A	H. Solomon
1141	Part 16 Consistency Clean-up Annex C	H. Solomon
1142	Add Context Group for Cardiac Sync Technique	H. Solomon
1143	Change NCDR Nomenclature to SNOMED	H. Solomon
1144	Correct Wall Motion Codes CID 3703	H. Solomon
1145	Add Informative SNOMED Numeric IDs	H. Solomon
1146	Enhance Cardiovascular Procedure List	H. Solomon
1147	Observation UID	H. Solomon
1149	Add Staining Equipment and Protocol Codes	H. Solomon
1150	Inconsistent Raw Data Reference in Enhanced PET	B. Revet
1151	Correct Condition for "Number of Pulses" in TID 10003	B. Revet
1153	New Instance Reference Attribute in SOP Common	R. Horn
1154	Clarify usage of Referenced SOP Sequence in Storage Commitment	M. Jonas

Note: the following CPs that were in the VP/Aug11, were not approved for LB #63 and remained assigned. Both WG-06 and WG-07 discussed the below proposals and found unresolved issues.

CP	Name	Assigned to and/or Outcome
1137	Structure Set Relationship Sequence	U. Busch/WG-07/ more discussion needed
1138	Average Beam Dose Parameters	U. Busch/WG-07/ more discussion needed

6. Change Proposals moved to VP (Voting Package) for October 2011

During this meeting, members of WG-06 reviewed the following assigned correction proposals and, after some modifications, voted to include them in the WG-06 **Voting Package for October 2011**:

CP	Name	Assigned to and/or

1283

		Outcome
1123	Add codes and SOP Common attribute to identify data created for quality purposes	K.O'Donnell
1156	UUID as UID	H. Solomon
1157	Correct RT Plan Module Conditionality	H. Solomon
1158	Clarify RT Structure Set ROI Number	H. Solomon
1159	Correct Part 16 Codes	H. Solomon
1160	Degree sign in UCUM	H. Solomon
1161	Correct Plural Code Meanings	H. Solomon
1162	Correct Gyn History Code	H. Solomon
1165	Clarify Coding Scheme Designator	H. Solomon
1166	Allow Frame of Reference in Segmentation even if derived image references	D. Clunie
1167	Coding scheme for UK NHS National Interim Clinical Imaging Procedures (NICIP)	D. Clunie
1168	Device observer code meaning incorrectly capitalized	D. Clunie
1169	Breast Tomosynthesis is missing X-Ray Receptor Type so condition on Field of View Origin is incomplete	D. Clunie-Discussed w/WG-15, merged HS38 into this CP
1170	Add AAPM 204 Size-Specific Dose Estimates to CT RDSR	D. Clunie
1171	Encapsulated Document Bulk Data	R. Horn
1172	Incompleteness of CP-1027	R. Horn
1174	New PET Isotope and Radiopharm codes needed.	B. Revet

CP-1158   -discussed that CP should not break current implementations. WG-07 noted this sequence could never be type 3. Will be included in VP Oct11

7.   Other Previously Assigned Change Proposals Discussed

The following change proposals were discussed and dispatched as noted:

CP	Name	Assigned to and Outcome
992	Clarify Allowable Length Values for Certain PDUs	K. O' Donnell, assigned, revisions directed, held for further review at future mtg.
1077	Add CR Report Type to Dose SR and Relax Content Conditions [The CP proposes to use the same template for all fluoro, mammography, and CR and DR rather than creating new template for CR-DR.)	Kevin O'Donnell. Assigned, WG-02 proposed adding 3 groups of data. R Horn proposed adddding a code modifier.
1137	Structure Set Relationship Sequence	U. Busch/WG-07/ more discussion needed
1138	Average Beam Dose Parameters	U. Busch/WG-07/ more discussion needed
1164	Coronary Artery codes	H. Solomon, remains assigned
1173	Clarify basis for Total Fluoro Time and Total Acquisition Time in XA Dose Report	K. O'Donnell, remains assigned

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8. Previously Assigned Change Proposals – Not Discussed

The following change proposals were not ready for review at this meeting and were held over for future consideration:

CP#	Title	Assigned to
145	Curve Data Value Representation Clarification	D. Clunie
235	Clarify NM detector start angle usage	J. Pohlhammer
296	Eliminate Duplicate Terms and Provide Missing Definitions	H. Solomon
375	Correct CID 4017 – Intra-oral Anatomy Modifier	K. O'Donnell
430	Additions to PS 3.16 for Cardiac Cath SR	H. Solomon
450	Correct Myocardium Mass	D. Sluis – reassign?
464	Add SOP Common to the Print-related N-CREATEs	R. Horn
471	Add Common Finding Template	H. Solomon
591	Attribute Identifier List for Errors in Sequence Attributes	H. Solomon
596	Add Request and Schedule Information to Results and MPPS	R. Horn
597	Instance Availability Notification Structure	H. Solomon
757	Add RTSS ROI Feature UID	H. Solomon
802	Incorporate Fixes on 702 and 706	D. Clunie
804	Indicator for Cone Beam CT	K. O'Donnell
811	Note for Forwarders Regarding SCP-assigned Instance UIDs during N-CREATE	D. Harvey
812	Clarification that Pixel Padding Value Is a Raw Value before Any Transformations	D. Harvey
833	Transfer Syntax Availability and Selection for Q/R	R. Horn
836	Clarify Usage of Attributes for Normalized IODs	K. O' Donnell
838	Consistent Naming of Error Code Tables	K. O'Donnell
934	Fix Inconsistency of C-FIND Only Number of Patient Related XXX Attributes	D. Harvey
941	More Clarification of Instance References	D. Clunie
944	Extend Procedure Intent Context Group	D. Clunie
991	Clarify Handling of Private Data in the Retrieve Without Bulk Data Service	R. Horn
1005	Make Keywords Valid Java/C Identifiers	R. Horn
1006	Add Keywords to Command Dictionary	R. Horn
1013	RT Ion Beams Recording Clarifications	Continues- Assigned to WG-07 (Curran)
1019	Add Body Part at the Study Level	K. O'Donnell
1030	Re-factor Common Attributes for Enhanced Images	B. Revet
1031	Use of OIDs and Non-ASCI Characters in Codes	R. Horn
1032	Fix Position Angle Sign Inconsistency in Mammography Image	K. O'Donnell or J. Keyes
1066	Encoding of Attributes with Value Length > 64KiB with Explicit VR	R. Horn
1086	New DICOMDIR ZIP File Extension	R. Horn
1105	Conformance Claim for SR-CDA Transform (Assignment changed to Bjorn Nolte – will consult with Helmut Koenig.)	Assignment changed to Bjorn Nolte
1106	Assign a Namespace for Audit Schema Elements	R. Horn
1112	Add SR Structure for ROI Statistics	Continues- Assigned to H. Solomon
1115	Add Dose Reference Point Codes for CR/DR	K. O'Donnell
1126	Corrections LOINC Codes Sup78	B. Revet
1127	Add Fields for Organ Dose to Dose SR	K. O'Donnell
1148	Add Pathology Protocol Codes	H. Solomon
1152	Additional document titles for Key Object Selection Document	R. Horn

File ID	CP Number assigned	Name	Assigned to or Outcome
1163		Conformance for Application Hosting	H. Solomon, assignee (L.Tarbox & WG-23)

9. New Change Proposals

The following new change proposals were reviewed and dispatched as noted:

File ID	CP Number assigned	Name	Assigned to or Outcome
Dac174	1175	Structured Display needs creation date & time for instance and DICOMDIR	D Clunie
FS/WG-02	1176	Change CID of Anatomic Region Sequence for X-Ray 3D Angiography	B Revet
FS/WG-02		X-Ray_3D_Enhanced_ContrastBolus_condition_new_template	B. Revet will discuss with WG-2 to withdraw. DC noted this is precedent setting proposal and validity was questioned
HS42	1177	Remove inaccurate series description	H. Solomon
HS43	1178	Add guidance intent to CID 3629	H Solomon Discussed references to CID. More discussion needed.
HS44	1179	Correct RWV Map in NM IOD	D. Clunie assigned
HS45	1180	Use LOINC_Short Name	H. Solomon, HS was asked to give examples
HS46	1181	Correct LOINC_codes for fetuses	H. Solomon
HS47	1182	Add Rad Dose SR to CT Media Profiles	H. Solomon, Discussed the merit of expanding old profiles. Gen Purp. Profiles would not be suitable
HS48	1183	Clarify Meanings for UCUM codes	H. Solomon
HS49	1184	Retire CID 3082	H. Solomon
HS50	1185	Correct Vascular Resistance Units	H. Solomon
KV-20	1186	Remove Concatenation requirement in agreement with CP1073	B Revet
Part2Typos	1187	Wrong DICOM Tags are referenced in part 2	B Revet
RT17	1188	Add Tray ID To Compensator	U Busch
WG-16	1189	Add usage of Temporal Position Time Offset to Per Frame content Macro as needed for Enhanced MR and Enhanced CT objects.	B Revet Why isn't temporal Position Sequence used? Need more context. Example for each modality changing the multiframe concept. Need more rational, why not use other attributes.
Ophthal	1190	Add 'Purpose of Reference Code Sequence' to Ophthalmic Frame Location Macro	B Revet

The comprehensive list of all CPs is file CP-2011-08-26.xls, posted in
ftp://medical.nema.org/MEDICAL/Private/Dicom/WORKGRPS/Wg06/2011/2011-08-23

10. Supplement 150 – Radiation Dose Related Information in Radiology Reports {WIR 2007-06-C}

The purpose is to produce a Final Text.

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On 8/23, Supplement Editor Helmut Koenig presented the comments and WG-06 discussed them and suggested revisions. Mr. Koenig made the changes including the editorial changes to recognize the publication of the 2011 Edition of the Standard. On 8/26 Mr. Koenig presented the revised text and it was approved as **FINAL TEXT.**

11. **Supplement 147 – Second Generation Radiotherapy {WIR 2007-06-B}**

The purpose of this review is to produce a draft for Public Comment.

WG-07 Vice Chair Christof Schadt, was presenting the supplement. WG-06 continued the review with WG-06 of this substantial supplement. This review started at the January meeting of WG-06 and continued at the April and June 2011 meetings of WG-06. WG-07 requested and used 6 hours for this meeting. Mr. Schadt presented the results of WG-07's meeting held in early August. The detailed reading continued at this meeting. Additional review time before Public Comment will be needed. WG-07 will again meet in November. WG-06 will schedule additional time on the Agenda of the January 2012 meeting.

WG-06 provided directions and advice for several changes and made numerous revisions during this meeting.

This Supplement will **return** to WG-06, in January 2012.

12. **Work Item – Basic Distributed Object Consistency Management** {WI xxxx}

Fred Behlen discussed the history and underlying need for this item. This Work Item was originally proposed to the DSC on September 11, 2009. This revised proposal removes proposed archive behavior definitions, which WG-06 may propose in a separate Work Item, and further narrows the scope of solutions proposed to exclude use cases served by the IHE Imaging Object Change Management (IOCM) profile.

It will be proposed that the DICOM Committee approve this Work Item for the development of a supplement to define SOP Classes for recording changes in persistent instances. As the preferred protocol for distributing and storing medical imaging data, vast numbers of DICOM objects are created and distributed every day.

For various reasons, it is common to create and distribute multiple copies of instances:
- Providing copies to other sites (or departments) caring for the same patient
- Local caching of instances to compensate for network performance
- Multi-server / Multi-site configurations.
- Migrating to a new PACS system
- Offline media for disaster recovery

This supplement will limit duplication. Most of the use cases involve patient identity. The amount of data impacted was discussed. Revisions were made during the meeting: the Work Item intends to be more selective and targeted that the IOCM solution (rewrite should be more limited when it is only for the change of one attribute) and clarifying synergy rather than competition with IOCM.

The DSC directed the development of a White Paper for discussion in WG-10. F. Behlen reviewed the draft Paper, as well. He will present the White Paper before submitting to the DSC\; it will contain explanatory information that would not be appropriate for the Work Item.

This is a WG-06 Work Item. It **will be submitted to DSC in September 2011.**

13. Supplement 124 – Communication of Display Parameters {WI 2004-12-B}

Norihisha Matsui and Masatoshi Kanzaki of WG-11 prepared the supplement for the purpose of Public Comment. They were connected by phone and web meeting. Kevin O'Donnell assisted representing the supplement in person. Lengthy and productive discussion was conducted over the three day period. WG-06 discussed and decided on some simplification of structures, discussed definitions and added the IEC definition to the text, reviewed the status mechanisms among other revisions. Significant comments were provided by Rob Horn and Marilyn Maguire. The Supplement will **return** for 6 hours in October 2011 with the objective of winning authorization to issue it for Public Comment.

14. Supplement 152 – Ophthalmic Thickness Map Storage SOP Class {WIR 2006-04-G}

The goal of this review is Final Text. The Supplement was approved by Letter Ballot. Don Van Syckle led the discussion and Mark Horton and Tobias Kurzke of WG-09 supported him in person. Don reviewed the comments received during balloting. WG-06 approved revisions based on the comments and on additional discussion. Don will also make editorial changes to recognize issuance of the 2011 Edition of the Standard. The Group approved the supplement for **Final Text.**

15. Work Item: Multi-Frame Converted Legacy Image Project

The goal is to approve the WIP for submission to DSC.

The Group discussed the Work Item Proposal (WIP) that was prompted / requested by WG-27. This WIP will be sponsored by WG-06; it was assigned to and drafted by David Clunie. This WIP uses existing structure to convert single instance data to multiframe mode, i.e. convert legacy data to to enhanced objects for more efficient transport. It is hoped that this will be considered an interim step and ultimately promote implementation of enhanced objects.

D. Clunie will revise and submit to DSC September meeting the WIP. WG-06 will organize an ad-hoc work group to develop the supplement. The ad-hoc group will meet in connection with WG-06. WG-11 will be appraised of the progress. This will solve the heretofore unresolved problem of transition to enhanced multiframe objects. The topic will **return** for review of draft.

16. Supplement 148 – WADO via Web Services {WIR 2008-04-B}

The goal is to produce Final Text.

Rob Horn led the discussion with WG-27 for two t-cons reviewing and responding to the Letter Ballot comments. (Letter Ballot ended June 10, approved.) The comments were mostly addressing the conformance section. Significant discussions took place in WG-27 and Mr. Horn revised the Supplement accordingly.

WG-06 approved the Supplement 148 as **final text.**

17.   **Future Meetings**

The Group's future meeting dates and locations are as follows:
- October 11, 2011: Tcon for CPs, 10 a.m. USA Eastern Time
- October 24 – October 28, 2011 at MITA
  January 23 – 27, 2012 at MITA
- March 26 – 30, 2012 at MITA
- June 11 – 15, 2012 in Berlin
- August 27 – 31, 2012 at MITA (there may be a conflict for a member but it was decided that the rescheduling is not possible.)
- November 5 – 9, 2012 at MITA

Unless otherwise noted, meetings are scheduled from 8:30 a.m. to 5:30 p.m. each day; T-cons begin at times specified above and normally continue for two hours.

17. **Next Meeting Agenda**

A detailed agenda for the next meeting will be prepared at a later date. Anticipated topics for October are shown in the Agenda Plan for October 2011, which may be found in the meeting folder for the October meeting.

The Agenda Items are planned to include: Sup121, -124, 154, 155, and several "first reads."

18. **Adjournment**

The meeting was adjourned at 12:30 p.m. on Aug. 26, 2011.

Reported by: Stephen Vastagh, Secretary
                                                         Sept. 27, 2011

Reviewed by counsel: 2011-09-28