



July 22, 2010

FWGIDR Meeting Mystic, CT

52 attendees

Meeting called to order 0805 by Jim Prindiville.

Introduction of what we have done and the progress made with ASNT, DICONDE, and the vendor base. Comments focused on the impact FWGIDR is having.

Review of the Goal and mission of FWGIDR. The theme was to facilitate the transition from film to digital RT in all forms, while providing an open forum for the expression of ideas, concerns and needs.

Review of original task teams; Personnel Training, System Qualification, Hardware Solutions, Data Standardization and Management.

Reviewed agenda and the plan for the day which will be structured as a working group with break-outs and open discussions.

0820: Training Team: John Ellegood

Present tasking: Develop Level I & II training curriculums; inviting input and recommendations from the group.

Reviewed our past accomplishments, which at the completion of the project the vendors were invited to comment. Additionally, we have joined the Penetrating Radiation Committee at ASNT.

Even though several companies have developed training based on FWGIDR curriculum for Level III, however, it is still the employer's Level III to review and approve the class and the instructor. Encourages the Level III to document the rationale for approval of classes and instructors when utilizing outside training.

-ASNT is currently in revision. They determine that Radiology is one method with four techniques

-ANSI is also currently in revision and coming up on the balloting process. The current revision will delete limited certification

-EN 473 German committee is proposing 2 methods for Radiology: Radiographic Technique and Digital Radiographic Technique.

Two other organizations

-AIA NAS 410 Rev 3

-AeroSpace and Defense Industries Association of Europe.

*410 & ASD-STAN EN 4179 have a Memorandum of Agreement that both documents must be the same, to accommodate the world market in aviation.

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Current Task: Level I & II outline curriculum: drafts are complete and will be open for discussion this afternoon; the goal is to finalize these two documents for publication and present at DWGNDDT in December.

Goal: To provide recommended training to bring qualified film radiographers to “film-less” techniques.

-Outlines will combine CR and DR in each outline (to be tailored by company)

-Gave an overview of what requirements are and what is in the handout he had prepared for the afternoon brainstorming session.

? Question from audience: Will the PCC MAI experience be used for revision to the existing curriculum and used to assist with new curriculums in development. With the goal of utilizing lessons learned and to ensure that all training is consistent.

? Question from audience: CR is being used by AF for 10 years, without formal training mainly due to the lack of formalized training/certification available, is there any data showing planes crashing? Both Jim Prindiville and John Ellegood spoke of audits where companies are using the wrong equipment, calling the wrong acceptance data, costly repeat inspections, etc.

? Question from audience: During audits are Hardware systems looked at as part of the audit process. This falls into the process controls requirements and hardware is looked out as a part of the system controls and they are included.

Is ASNT looking to include DR in their exams? Yes they are looking into this and the discussion is should DR be included into the existing examination or should there be a separate testing cycle. ASNT is looking into this and FWGIDR has been invited to the Testing and Certification committee in the fall conference.

0845 System Qualification: Steve Possehl

Reviewed what has been accomplished, additionally he went on to discuss the ASTM documents which have been published. The FWGIDR guide will remove information which is covered in the new ASTM documents. The guide is to be utilized as a recommendation and educational guide so has more latitude.

Checklists: two made for DDA and CR due to the confusion which will arise from combining the checklists for these two technologies which have significant similarities, but are still different.

Steve went on to ask for input at this meeting and his plan to solicit input via e-mail in order to get the best checklist possible for publication review at the DWGNDDT in December, wanting to avoid people reading at publication and making comments at that time. Once complete the checklist will be tentatively published in January 2011.

Today's goal, does the group agree there needs to be two checklists, what other specifications need to be included, and what specific areas (if any) need to be included, etc.



Jim Prindiville discussed the Practice and Performance ASTM documents which are newly out . Still pending is Guide.

John points out the problems with the lack of high energy considerations in the ASTM standards and publications; as just one of the issues which the FWGIDR need to influence. Jim P encourages the entire group to participate with the efforts underway by FWGIDR as there will be at least one member at all ASTM and ASNT meetings to the entire group will be represented even if each individual cannot necessarily travel to the meetings personally.

0905 BREAK

0923: Hardware Task Group: Enrico Quintana

Reviewed what has been accomplished to date, i.e.: the completed White Paper and associated feedback. The intention is to publish the paper in journals, but asked for comments and feedback. Announced the formation of a CR users group. Would like to do a CR round robin which would encompass all agencies which would like to participate. This would allow the development of a phantom, create grading criteria, compile results and publish the report of findings. Would also like to consider doing the same tasking with panels and calls for anyone who has project funding to contribute data to the group. Encourages everyone to log on to the FWG Forum for collaboration facilitation.

? Question from the group: is the DoE working with a vendor develop high energy panels? Yes they were but the company has since gone out of business or was bought out.

A: Put on our site the work from Ken's group on <160 studies on plates

The round robin will be the focus of the afternoon session. However, the group has asked for information on High energy (Mev and above primarily focused on 450 and above) applications. The thought is that if high energy is proven then low will be included. Microfocus will not be included at this point.

What is the thought focus on the phantom. That has been thought of extensively, however some x-ray simulation will have to be run prior to making any decisions on specific line pare gages, phantom development, and parameters but will lean towards the higher energy systems. The goal would be a way to categorize the systems which are out there and to create some form of matrix matching the plate with the scanner.

The fear that there would be an conflicting overlap with the systems team, however it was explained this effort would focus on the scientific arena and Systems group is working with existing equipment. Additionally, Steve Possehl will have access to and will review the data to ensure that any considerations or possible conflicts are addressed.



Data Standardization: Lloyd Arrowood

Discussed past accomplishments: numerous presentations, white paper released, publications, DoD adoption of ASTM 2339. One of the major accomplishments and goals of the group is to publish DICONDE and promote DICONDE. Participates in various groups to not only bring DICONDE into the standards arena. Additionally, the vendors are not only showing interest in moving towards DICONDE adoption into their equipment, but at least two have announced they are already implementing.

Currently working on new ASTM practices covering IODs in UT, CR, DR and CT. Trying to establish a suite of tests to facilitate DICONDE compliance proving vendors claims. The goal is to allow two imaging workstations the ability to share data. Not necessarily outside of the organization, but the ability to share within an organization or plant.

Future activities will include Legacy issues (and if legacy conversion is even necessary or wanted), procurement template for DICONDE compliant imaging systems (this will include a contractual statement strawman which could be used to give the procurement staff guidelines to ensure the vendor is actually supplying DICONDE compliant equipment. Additionally new standards encompassed by DICONDE will also include Eddy Current, Source Radiography (CR and DR)

Neutron Radiography, Thermal Imaging, Data archival and management and validation methods.

Break-out session later today will be discussing modalities in use which do not have DICONDE, what are the group's actual legacy issues and the procurement template (what would be useful to the community to promote a move toward compliance)

Jim Prindiville asked the group what was being done now to archive data now.....most were using CD's and DVDs to archive and Jim pointed out the future issues of this type of data archiving practices. Lloyd pointed out the great deal of variability in commercially available CDs/DVDs with regards to storage, handling, life expectancy, etc.,

1015 BREAK

Monitors: Scott McClain

Discussed the fact the team is new and is looking for feedback from the group. He is looking for a direction to focus on to meet the needs of the group. Asked: How many people/organizations are doing anything to qualify monitors...just a few hands went up and the group discussed light meters, SMPTE test patterns, display resolution, flatness/even resolution, gray scales, etc. Overall there was very little continuity as to what the group was doing. Jim Prindiville pointed out that very few people have problems with home monitors, but there are valid considerations regarding monitors in the industrial applications. Some of the new standards will have brightness level requirements, calibration of monitors and the just perceptible difference of the human eye when discriminating the contrast differences. Degradation of monitors to degrade over time and the degradation over time cannot necessarily be noticed over time, but the ability to detect discontinuities will degrade. There will be technical requirements which will require organizations to calibrate/prove the validity of monitor capability. These standards will not only cover the monitor technology but viewing rooms and back

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lighting considerations. Monitor uniformity will also have to be monitored and measured. This group needs to provide input as to where the FWGIDR direction and input desired in influencing the future requirements. Lloyd also pointed out that different results and uses will predicate the actual requirements in monitors.

Pixel mapping was brought up as a concern, leading to the discussion as to which of the monitor pixel mapping test currently used in the medical field will be reasonable for the industrial applications. The group needs to provide information and education on monitors is the start of the group focus.

A comment from the group brought out that in addition to anything else the sensitivity of the defect identification will guide the choice of monitor necessary for use. Another issue is light adaptation, in a film environment the interpreter would use a darkened room to allow the eye to adapt; however in DR the images are available immediately and so too often a person will view images in an inappropriate environment leading to misinterpretation of images strictly due to the lack of eye adaptation. Another issue to discuss and develop guidelines. A great deal of discussion ensued concerning eye adaption.

Goal of the afternoon session will be to gather ideas, input and consensus of direction for the group to gather and create white paper/presentation for the DWG in December.

? Question from the group: how often is a monitor checked....A: everyday IAW ASTMs.

Information Sharing and Data Exchange (GIDEP): Paula George

Presentation given on the GIDEP web page. She also explained the GIDEP site is providing us a forum site with access for input, at no cost, in return for the submission of our finished White Papers. Forum log-in screen shown and she explained how entrance to the site is necessary.

Question from the group: is the creation of a new topic the only way to get automatic notification? A: At this time so that people are not inundated with e-mails every time a comment is added to an established topic. (Note: An Administrator can re-release a topic to get another automatic notification.)

Again it was emphasized that the FWGIDR forum site is NOT GIDEP, just provided by that organization. In order to sign on go to:

<https://fwgidrforum.gidep.org>

1200: Lunch

1300: Meeting reconvened

George Hodges opened by discussing the DWGNDT meeting in Ft. Worth Texas.

1315: Jim Prindiville described the different breakout sessions planned for the afternoon session. By show of hands the audience expressed their interest in working with each of the groups, many expressed interest in multiple sessions. Jim announced the groups would run for 1 ½ hour and then could reshuffle if needed.

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It was decided that the Data Standardization Team and the Information Sharing Team would not meet separately at this specific meeting for breakout.

1320: Break out.

System Qualification Breakout:

Discussion ensued on the draft checklist under development. Areas discussed:

General facilities

- Climate control
- Equipment maintenance
- IQIs and standards
- Cert to 543 ?

Software

Personnel

- Training
- Certifications required (problems arise with the lack of current cert development)

Process Controls & Procedures

System Performance Testing

- Degradation monitoring

Qualification Plans (good idea, but not required by current specifications)

Approved Techniques

Purchaser & supplier agreements in place (ASTM E 1742 is currently called out in existing contracts, however it is no longer adequate for evolving technology)

Discussed the various systems the group was working with

Army Aviation Center of Excellence

Discussion also included the data storage issues faced by all.

The Army Aviation Center of Excellence is working on deciding on a system for an Army-wide purchase, however needs the contractual language; i.e. DICONDE.

Naval Surface Warfare Center-Indian Head uses lead lettering, numbers and identification tags on everything because their system was never DICONDE compliant. They have great fear of losing identification of the items tested.

ATK talked about their equipment. They have high energy CT and microfocus low energy systems, in addition to other equipment; they have many questions on what needs to be done regarding the checklist. Additionally there were questions about what portions of the equipment settings and checks the operators should have control over (i.e. filters, image appearance, lasers, etc.).

Steve Possehl (NSWC) talked about the differences between the DDA and CR specifications. The CR specifications are not going to be updated any time soon. Going to use the draft CR specification for this effort.



Some of the requirements in the up-dated ASTM specifications are not reasonable or practical, so the Task Team wants to use feedback from the FWGIDR membership in the checklist development and recommendations. For example, pixel mapping—how much and how often. (How much is too much?)

Steve Possehl is going to make corrections and update his checklist and send it out to the team for comments and input. The group is unsure as to how many activities have the ASTM in contracts. He is not sure what the requirements are from NADCAP, as they also have a checklist under development based on the ASTM.

Long discussion on pixel mapping v/s software issues, the need to check for degradation of the system and the need to be concerned with bad pixel clusters.

The group decided that the specification requirement and FWGIDR recommendations should be grouped together by subject area in the checklists.

Other topics discussed were:

--DDA specification does not really mention data storage and does not mention DICONDE

--Draft ASTM CR requires DICONDE, but it has not been issued yet.

--Talking about phantom, this area has not been fully examined for high energy applications, and organizations are unsure of what to use for high energy.

Training Team Breakout--John

Personnel Training

- Need to put recommended training hours into the outline
- May need to revise L3 outline to include recommended training hours and reference material

Hardware – Enrico

- Send Rico info on the high voltage line pair gage – need to look at Aerojet folder

Image Display Monitors – Scott

- Lloyd, there are two levels of qualification. Most medical monitors come with software for the initial qualification, then there are tests you can run to determine continued performance
- Response of human eye is what should drive monitor requirements
- Image review environment
- Eye adaptation (bright room to darkened room) – how long?



Collaborative Web Site – Paula

- FWGIDRSystem@gidep.org
- FWGIDR Management – FWGIDR Forum
- <https://fwgidrforum.gidep.org/>

Training Breakout Session:

Do we want to do training for current certified Level 1 film radiographers or for trainees?

We should do both

For L2 – both

Next

L1 duties: - all work by the L1 is to be done per a qualified procedure – even with calibrations (for film, perhaps the densitometer), (for DR perhaps the gain and offset)

My desire is to train to meet the full requirements of the NAS and SNT-TC-1A.

L2: accept/reject evaluations, technique development (**PCC and Howmet want to be careful with technique development, not all of their L2's are qualified for this**) and document results

Much debate on actual duties/responsibilities – again, PCC and Howmet reps want to be careful that not all L2's are required to do technique development

Make a recommendation on overall training hours so the user can break it down as they need to for their operation

Trainee – radiation safety, the level 1 full curriculum

L1 current film –

Per Jim P, 3 sections – basic radiography for everyone (adopt from ASNT), film section (adopt from ASNT), then DR/CR section for someone that is already film qualified

Should there be a basic section and an advanced section or not? - no

Look at current ASNT list and identify what are basics, what is film, then propose additions for DR/CR

Should make a spread sheet with blocks on left to check if applicable to film, DR or CR

We also need to make a common sense minimum hours recommendation

We need to set up a telecom and/or email list to work this

Add Scott McClain to training email list (also include all the leadership team) and Ken LaCivita

Follow up report afterward - What we did in the breakout session:

- We will break our training into 3 sections: Basic radiography and a film section (both adopted from ASNT) and a DR/CR section
- We will have a list (spread sheet) that can be checked off as to which section each topic belongs to
- We talked about sorting our curriculum requirements listing each section to the NAS 410 outline requirements that it applies to
- We brainstormed the 2 FWGIDR Draft outlines and added items (will need to continue this effort and sort in a logical order)
- We also want to keep this group active by setting up a web-ex and email correspondence with a goal to continue this brainstorming and development process to have a final draft in place by the December 9/10 (Fort Worth) meeting (action for John E)

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