

and Digital Computed Radiography

One Day Seminar

March 6, 2010 - Minneapolis, MN
May 15, 2010 - Grand Rapids, MI
June 5, 2010 - Atlantic City, NJ
September 11, 2010 - Madison, WI



8 hours
Category A
Continuing
Education
Credits

MTMI

Medical Technology
Management Institute

About this Seminar

Diagnostic imaging has undergone an explosion in technology with the advent of computerized imaging, and the production of digital radiographic images is rapidly replacing film/screen radiography. Creating radiographic images in a digital format has considerable advantages, including electronic processing, storage and image manipulation. With the ongoing development of applications in digital radiography, imaging professionals are expected to master computerized imaging, and display a high level of knowledge and awareness of the capabilities of their imaging systems. Patient safety and reliable diagnostic information are intrinsically linked to these factors. This seminar will provide imaging professionals with an excellent opportunity to refresh their knowledge on computerized imaging, detector technology, image acquisition techniques and processing, radiation safety and Quality Control.

Educational Objectives

At the completion of this seminar, participants will be able to:

- Describe the technology of digital projection imaging.
- Understand how image quality indicators in digital imaging compare to film/screen.
- Understand the technological differences of CR and DR and the different vendors options.
- Understand the clinical advantages and limitations of CR and DR.
- Understand the processes by which artifacts are created in digital imaging and know how to perform artifacts corrections.
- Understand how exposure parameters work in digital imaging compare to film/screen.
- Reduce exposure dose in digital imaging.
- Understand the principles of digital images manipulation.



Who Should Attend

This seminar is designed for all imaging professionals who are interested in increasing their knowledge of this rapidly expanding modality. Both radiological technologists who currently are working in digital radiography and those who are not will benefit from this seminar. A basic understanding of the principles of conventional film screen radiography will be assumed.

Instructor

Philippe Moh, Mphil, BS, RT(R)



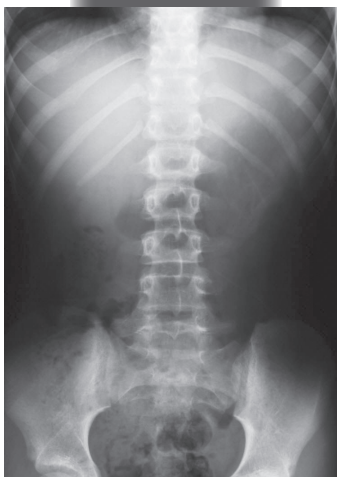
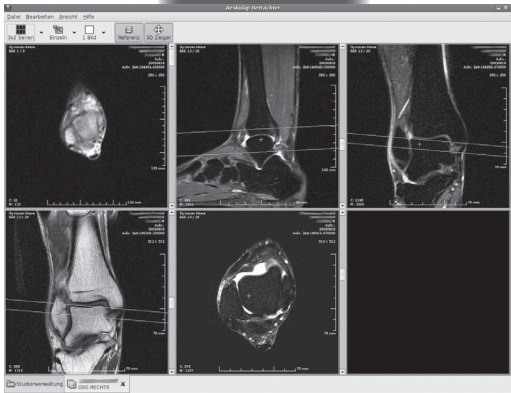
Philippe has taught medical imaging sciences at both the Tromsø and Oslo University Colleges in Norway, one of the world's earliest adopters of digital radiography and PACS. He holds a BS degree in radiological sciences from the Tromsø University College and a Masters in Public Management. Philippe has an extensive clinical and teaching experience in both X-ray and CT and has developed educational programs in these modalities, including Problem Based Learning approaches in radiography education.

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Continuing Education Credit

This program provides 8 hours of Category A continuing education credit recognized by the ARRT for radiologic technologists, and credit from various licensure states. A certificate of attendance will be provided for each individual upon completion of the seminar. All attendees must attend the entire seminar to receive full credit.



Seminar Schedule

8:00 am

Registration and Coffee

8:30 am

Basics of Digital Projection Radiography

- The digital revolution: from film/screen to Image Plate (IP)
- What's the difference?
- Understanding the concepts:
 - Binary system
 - Pixel
 - CR
 - DR
- Understanding the difference between CR & DR

9:45 am

Informal Discussion and Break

9:55 am

Creating the Digital Image

- Digital Detector Technology
- DR Detector Technology
- Image acquisition
- Processing the raw PSP image, look-up-table (LUT)
- Window Width and Window Level
- The characteristic curve response: film-screen vs. PSP
- Histogram equalization.

10:45 am

Digital Radiography Exposure Indicators

- The concept of high latitude and exposure techniques
- Sensitivity Number, Exposure Index and IgM
- Dose awareness

12:00 pm

Lunch (on your own)

1:00 pm

Image Quality Parameters in Digital Radiography

- Detective Quantum Efficiency (DQE)
- Modulation Transfer Function (MTF)
- Spatial Resolution
- Noise
- Contrast

1:50 pm

Artifacts and Artifacts Correction

- Image Artifacts
- Film Artifacts
- Objects Artifacts
- Software Artifacts

3:05 pm

Informal Discussion and Break

3:15 pm

Quality Control of Digital Radiographic Imaging Systems






- Relative Sensitivity
- Contrast Evaluation
- Workstations
- Shading
- Laser
- Image Noise

4:30 pm

Adjourn

Registration

To register for this seminar:

-  go to www.mtmi.net or
-  complete the registration form below and
-  mail it with your tuition to MTMI, or
-  call (800) 765-6864 using MasterCard or Visa, or
-  fax the form to (262) 717-9171 w/credit card info

- Refunds, minus a \$30 processing fee, will be granted for cancellations received prior to the Tuesday before the seminar.
- Cancellations received after the Tuesday preceding the seminar will receive a credit toward a future MTMI seminar, minus the \$30 processing fee. No refunds will be made after the seminar.

Registration Discounts:

Group discounts - must register at the same time:

- 3-5 attendees receive a 5% discount on each registration
- 6+ attendees receive a 10% discount on each registration

The discount is not applicable if the tuition is paid by purchase order. For student rates, contact MTMI. Members of MTMI receive a 10% discount. Only one discount may be applied except for Institutional Members.

MTMI reserves the right to cancel any scheduled program because of low advance registration or other reasons.

MTMI's liability is limited to a refund of any program tuition paid. MTMI recommends that attendees use refundable airline tickets. In case of cancellation of a seminar for any reason, MTMI is not responsible for travel costs incurred by attendees including non-refundable airline tickets.

Membership

Membership in the Medical Technology Management Institute includes:

- ◆ discounts on **MTMI** services
- ◆ member newsletter
- ◆ web access to replace certificates
- ◆ yearly transcripts
- ◆ special benefits throughout the year exclusive to members

Joining **MTMI** with this registration qualifies you for the member discount. Indicate your interest in membership on the registration form or call **MTMI**. Annual membership dues are \$42.50. Discount effective immediately.

Location & Accommodations

Specific location and accommodation information will be listed on our website as soon as arrangements have been made.

**Please go to:
www.mtmi.net
or call
800-765-6864**

Register early and SAVE!

Registration Form **Digital and Computed Radiography** date/city: _____

Please Print Clearly - This is how your name will appear on your certificate.

Name: _____ degree/title _____

Home Address _____ City _____

State: _____ Zip code: _____ e-mail _____ e-mail address used only for notification of future programs

Day phone () _____ Eve. phone () _____ FAX () _____

Call 800-765-6864 2 weeks before the seminar if you have special needs.



Registration Fee	Please enclose payment to MTMI
more than 14 days before seminar	<input type="checkbox"/> \$179 <input type="checkbox"/> \$161 (member price)
within 14 days of the seminar	<input type="checkbox"/> \$189 <input type="checkbox"/> \$171 (member price)
at-the-door	<input type="checkbox"/> \$199 <input type="checkbox"/> \$179 (member price)
MTMI membership	<input type="checkbox"/> \$42.50 (discount effective now)

Total enclosed:
\$ _____

Credit Card Number _____ Master Card Visa

Expiration Date: _____ Signature _____

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