Welcome!!!!

2017 Eye Care Connectathon Kick-off Webinar

Agenda:

- Welcome and Introductions (Don)
- Eye Care Domain Profile Status (Don)
- Q & A
- Connectathon purpose, preparation, processes, and schedule (Lynn)
- Final Q/A
Eye Care Profiles

You are highly encouraged to view a full overview of IHE profiles and use cases in the Eye Care domain.

- IHE Annual Webinar Series with presenters…
  - Don Van Syckle – DVS Consulting
  - Peter Scherer – ifa group of companies

- [http://www.ihe.net/Webinars/#eye](http://www.ihe.net/Webinars/#eye)

A summary follows…
Unified Eye Care Workflow

- Automated Workflow in your practice
- Patient Safety in Mind - *input patient information once*
- Products such as Practice Management Systems (PMS), Electronic Medical Record Systems (EMRs), Image Management (PACS), Image Display Workstation and eye care Imaging Devices
- Expanded to include EMR to refractive device measurement integration
  - Japan Ophthalmic Instruments Association (JOIA)
    XML-based refractive measurements
- Standards used
  - HL7 v2.5.1 messages, DICOM SOP Classes and JOIA XML streams

**All other workflows Retired**
- Advanced Eye Care Workflow - *Retired*
- Basic Eye Care Workflow - *Retired*
- Core Eye Care Workflow - *Retired*

*Pick the workflow configuration that fits your practice*
Real World Model I

**EHR provides DICOM patient list to devices & uses Image Management System (PACS) to archive images and reports**

- Patient Demo & Appointments Based Upon HL7 v2.5.1
- Device Patient List (Worklist) and Images/Reports (DICOM)
- Advanced Image Display (DICOM)
Real World Model II

EHR provides DICOM patient list to devices & stores/displays key DICOM images and reports (no PACS)

- Patient Demo & Appointments Based Upon HL7 v2.5.1
- Device Patient List (Worklist) and Images/Reports (DICOM)
- Storage & Display of Key Images on EHR
- Devices and Users responsible for safekeeping of images
Real World Model III

EHR does NOT support DICOM features (HL7 only) & integrates with PACS that supports DICOM patient list to devices and archival of images/reports

- Patient Demo & Appointments Based Upon HL7 v2.5.1
- EHR sends Patient and Order info to PACS (HL7)
- PACS provides patient list to devices (DICOM MWL)
- PACS archives images/reports (DICOM)
- Advanced Image Display (DICOM)
Refractive Measurements

• Extends U-EYECARE Workflow to standardize EHR to refractive device workflow
• Addresses scenarios where organizations have a PMS, an EHR and refractive measurement devices such as autorefractors, auto-keratometers, lensometers, etc.
• Based upon Japan Ophthalmic Instruments Association (JOIA) XML based specification, version 1.5
• Two workflow models are defined:
  – Refractive Measurements Model without Patient ID
  – Refractive Measurements Model with a valid Patient ID

Common format for all refractive devices
Japan Ophthalmic Instruments Association (JOIA)

- XML file based specification, IHE uses version 1.5
- Data objects are defined as “data classifications”:
  - Refractometer, Keratometer, Tonometer, Lensometer
- One or more “data classification” may be included in a file
- Transport mechanism not defined (in JOIA or IHE)
Intra Office Data Exchange

- IHE Content Profiles defines document data exchange based upon the HL7 V3 C-CDA (Consolidated Clinical Document Architecture)
- These templates only include general health care related data, such as medications, allergies, problem list ….
- Does not include specific eye care health care data, e.g. no refractive measurements, IOP, Visual Acuity…
- Eye care specific information has been added to C-CDA documents and received by systems supporting the general C-CDA templates.
- IHE General Eye Evaluation (GEE) enhances the Progress Note (PN) template to capture a patient’s visit.
- IHE Eye Care Summary (EC Summary) enhances the Continuity of Care Document (CCD) template to capture the eye care summary of a patient.
Intra Office Data Exchange

- IHE GEE and EC Summary are proper extensions to HL7 C-CDA
- C-CDA documents contain a human readable representation of the structured data, therefore, systems can display the general and eye care extended information.
- This enables the clinician to view all the data, even if the system does not process the eye care extensions.
- You should expect eye care specific systems to process the extended information.
IHE’s Technical Framework documents are published on ihe.net
•  http://www.ihe.net/Technical_Frameworks/#eyecare

BUT, some updates to EC-Summary from the Eye Care Technical Committee are pending publication.

Current status for each profile:

• U-EYECARE and GEE  
  • 2016 version on ihe.net; same version tested last year
• EC-Summary  
  • Updated with LOINC codes

Find links to the profile documentation for Connectathon testing at:

https://gazelle.ihe.net/content/ihe-eye-care-connectathon-2017-resources#EyeCareProfiles
Questions?
Connectathon purpose, preparation, processes and schedule

TOPICS:
- Important resources for Connectathon participants
- What happens during a connectathon?
- How do I register to participate?
- What is required to prepare?
- What is the timeline?
- Where do I find the documentation and tools?
- Q & A
Important resources for Connectathon

1. Connectathon Google Group
   …for email announcements
   https://groups.google.com/forum/#!forum/iheeyecareconnectathon

2. Gazelle (IHE’s test management tool)
   …for Connectathon registration and testing
   http://ihe.wustl.edu/gazelle-na/

3. Connectathon Resources Page
   …for schedule, testing resources, training material, etc
   https://gazelle.ihe.net/content/ihe-eye-care-connectathon-2017-resources
To provide context, let’s start at the end…

**Process During Connectathon**

- You are assigned a set of required tests for each **IHE profile/actor** you support.

- You execute each test with peer systems. This is an iterative process throughout the week.

- Connectathon monitors (Lynn & Don) examine results of individual test instances.

- Initial failures can be fixed and retested later in the week.

- Connectathon manager (Lynn) evaluates these results against the overall “success” criteria per profile/actor pair.

- Prepare and practice for the AAO demonstration.

Cooperative efforts to debug problems and work towards success.

Opportunity to find problems in products **and** in the profiles.
How do we make it work?

• **Gazelle** is a web-based software system to manage testing.

• Gazelle contains:
  • Test definitions linked to IHE profiles/actors/options
  • Embedded validation tools

• You enter: Test system details, profiles supported, configurations

• Gazelle presents you a customized list of tests to run

• During Connectathon...
  • Gazelle presents you a customized list of tests to run
  • Gazelle identifies candidate test partners
  • You choose your partners
  • You run a test, enter test evidence & results in Gazelle
  • A monitor stops by later to examine your results
  • Repeat…
When You Finish…

- IHE & AAO publish which *actor/integration profile pairs* each company has tested
  - We do not publish failures
  - We do not guarantee conformance to your customers
  - This is not government testing/certification

- You are prepared to participate in IHE showcase demonstration

- You have the benefits of an extraordinary testing opportunity
How do I get from here to the Connectathon??
Preparation steps

1. Decide what you want to do
2. Register for Connectathon
3. Complete advance technical preparation
   • Exchange DICOM, HL7 & CDA samples
   • Share your configuration details
   • Submit pre-Connectathon test results
Register for Connectathon

We have a single Gazelle for all NA connectathons
(same as last year)

http://ihe.wustl.edu/gazelle-na

- Gazelle remembers…
  - User accounts maintained over time
  - Company demographics & contacts maintained
  - Test systems & results from past connectathons
- Each connectathon is a different ‘testing session’ within gazelle
  - Eye Care 2012, 2013…2017
  - NA 2012, 2013…2017
  - Etc…
Registration Steps

1. Create a user account in gazelle *(now)*
2. Enter company and contact information *(now)*
3. Enter the “system(s)” you want to test and profile/actors/options supported *(due Aug 25)*
   - This can be a challenge for first-time participants
   - You need to understand profiles, actors, options
   - You need to decide how many systems you want to test
   - You need to get this right by the close of registration
   - Registration is not complete until this is done
   - “How to” training is available. Arrange for a phone call if you need help.
4. Register staff members who will attend Connectathon *(due Sep 22)*
5. Submit contract and fees to Flora *(due Nov 11)*
Gazelle Registration

*How to*….
*(mini refresher)*

First-time participants – contact Lynn

**WHAT & WHEN** (*Before* testing peer-to-peer at Connectathon)

- Submit sample content (DICOM, HL7, CDA) *(before Sep 29)*
- Test with partners’ samples *(before Oct 13)*
- Test using tools *(before Oct 13)*
- Exchange configuration parameters *(Oct 11 / Sep 30)*
- Review Connectathon test definitions *(before Oct 23)*

**WHY**

- Identify and correct software bugs in advance
- A key to success at the connectathon
Pre-Connectathon Test Types

• **Sample Exchange:** upload sample DICOM images, HL7 messages, or CDA documents into gazelle so your partners can review before the Connectathon.

• **Content:** Evaluate *(tool or manual inspection)* whether you produced the proper content for a message, image or document.

• **Workflow:** Exchange HL7 or DICOM messages with a tool.
Exchange of DICOM, HL7 & CDA Samples

**Purpose:** to avoid Connectathon surprises!!!

- **DICOM objects**
  - Modality and Evidence Creator systems submit DICOM samples & screen shots
  - Image Managers and Displays store & render them

- **HL7 message samples**
  - Many messages are new! So, no message validators yet.
  - ‘Sending’ actors produce HL7 messages
  - ‘Receiving’ actors have a chance to import/process them prior to Connectathon

- **C-CDA (GEE & EC-Summary)**
  - Content Creator systems submit samples
  - Content Consumers store & render/process them

- **Due Sep 29**
Tools

…and the challenge of new profiles…

VALIDATORS:

• Gazelle External Validation Service (Gazelle EVSClient)
  - Validate DICOM images, HL7 messages, CDA docs, more…
  - Non currently for C-CDA
  - We will do manual inspection

SIMULATORS:

• Order Manager (generates HL7 orders & DICOM MWL)
• Patient Manager (source of ADT messages, but no support yet for EYECARE-15 Patient Registration A04 & A08 message)
• Legacy MESA Tools (nearing retirement) - Workflow testing; tool takes the role of ‘surrounding’ actors
More “how to” coming after you register…

Finding & reviewing your tests in Gazelle

Entering your configuration parameters

Using Gazelle during Connectathon week
Stay informed…

• Connectathon Google Group
  https://groups.google.com/forum/#!forum/iheeyecareconnectathon

• Lynn Felhofer (gazelle, test tools, process, test definitions, profile questions)
  felhofer.lynn@gmail.com

• Don Van Syckle (demonstration, profile questions)
  don.van@dvsconsult.com
We hope you’ll join us in October!!