



The Printer Working Group

**Cloud Imaging Model Workgroup
Face-to-Face Meeting**

April 29, 2015

Sunnyvale, CA (hosted by Apple)

Agenda



When	What
11:00 – 11:10	Introduction and Administrative Intellectual Property Policy Statement. Identify Minute Taker. Introduce Participants. Status.
11:10 – 11:45	Review of Last Call Comments and Resolution Draft at: . ftp://ftp.pwg.org/pub/pwg/cloud/wd/wd-cloudimagingmodel10-20150416.pdf Comment resolution at: ftp://ftp.pwg.org/pub/pwg/cloud/wd/lcrc-cloudimagingmodel10.docx Quick Summary
11:45 – 12:00	Next Steps Encouragement to Vote. Transfer of Elements and Operations to SM.



Officers and Contributors

- Chair: Ron Nevo (Samsung)
- Vice Chair: Bill Wagner (TIC)
- Secretary: Michael Sweet (Apple)
- Document Editors
 - Bill Wagner (TIC): Editor
 - Ron Nevo (Samsung): Editor



Status

- The Cloud Imaging Requirements and Model specification has completed PWG Last Call. Last Call comments and resolution are at:
<ftp://ftp.pwg.org/pub/pwg/cloud/wd/lcrc-cloudimagingmodel10.docx>
 - There were 11 responses.
 - There was a total of 26 comments in two of the responses
 - Almost all responses were editorial
 - Comment on Internationalization was resolved by including what is evolving as PWG standard statement.
 - I also made some editorial changes while addressing Last Call comments.
- It is intended to put the current specification to vote, in conjunction with IPP INFRA, in the immediate future.
 - Please vote!



Comment Review

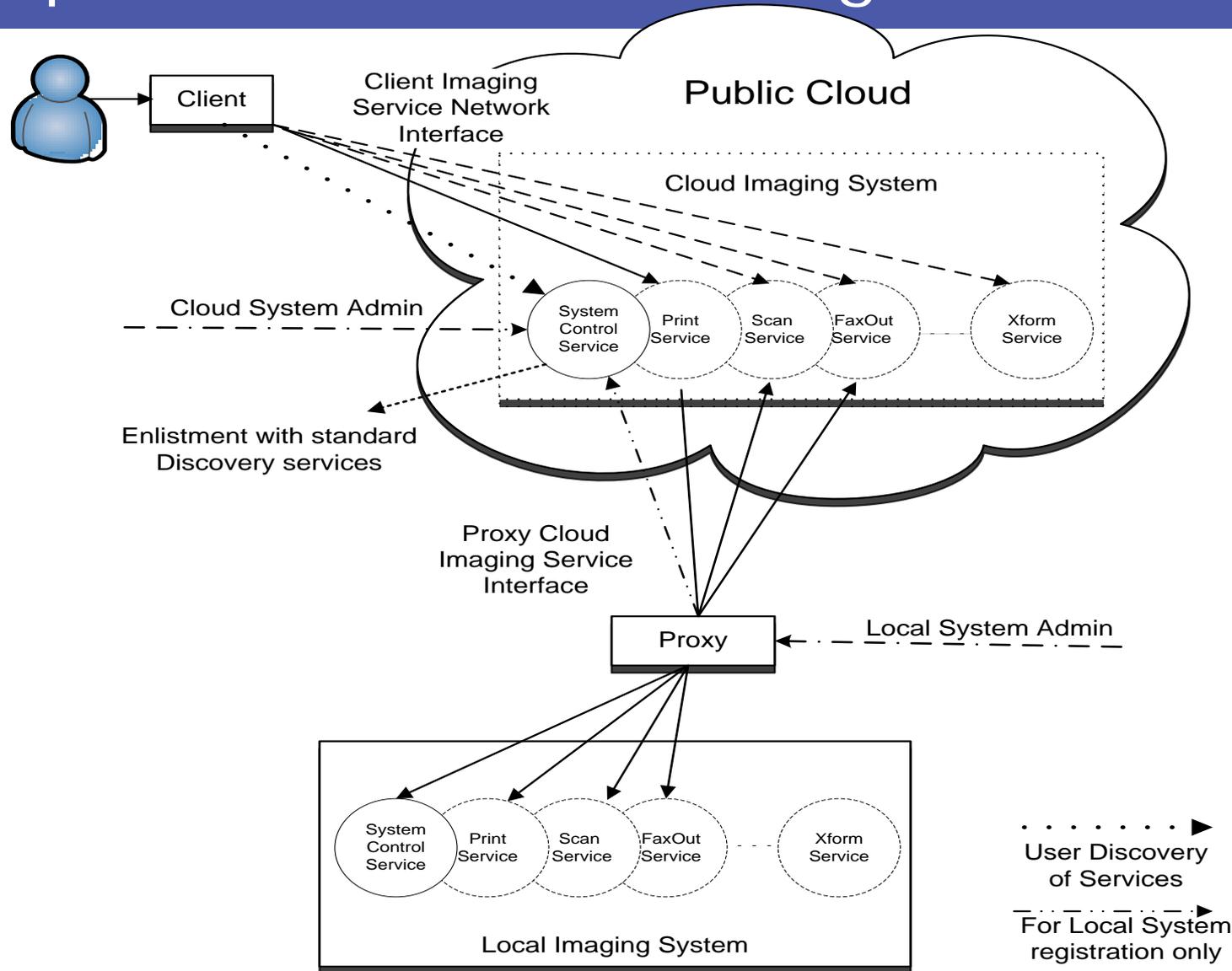
- The current marked up version showing all recent changes is at:
<ftp://ftp.pwg.org/pub/pwg/cloud/wd/wd-cloudimagingmodel10-20150416-rev.pdf>
- Will do red-line review of text correlating changes to comments (unless this considered as unnecessary)

Spec Review – What Does Model Say?

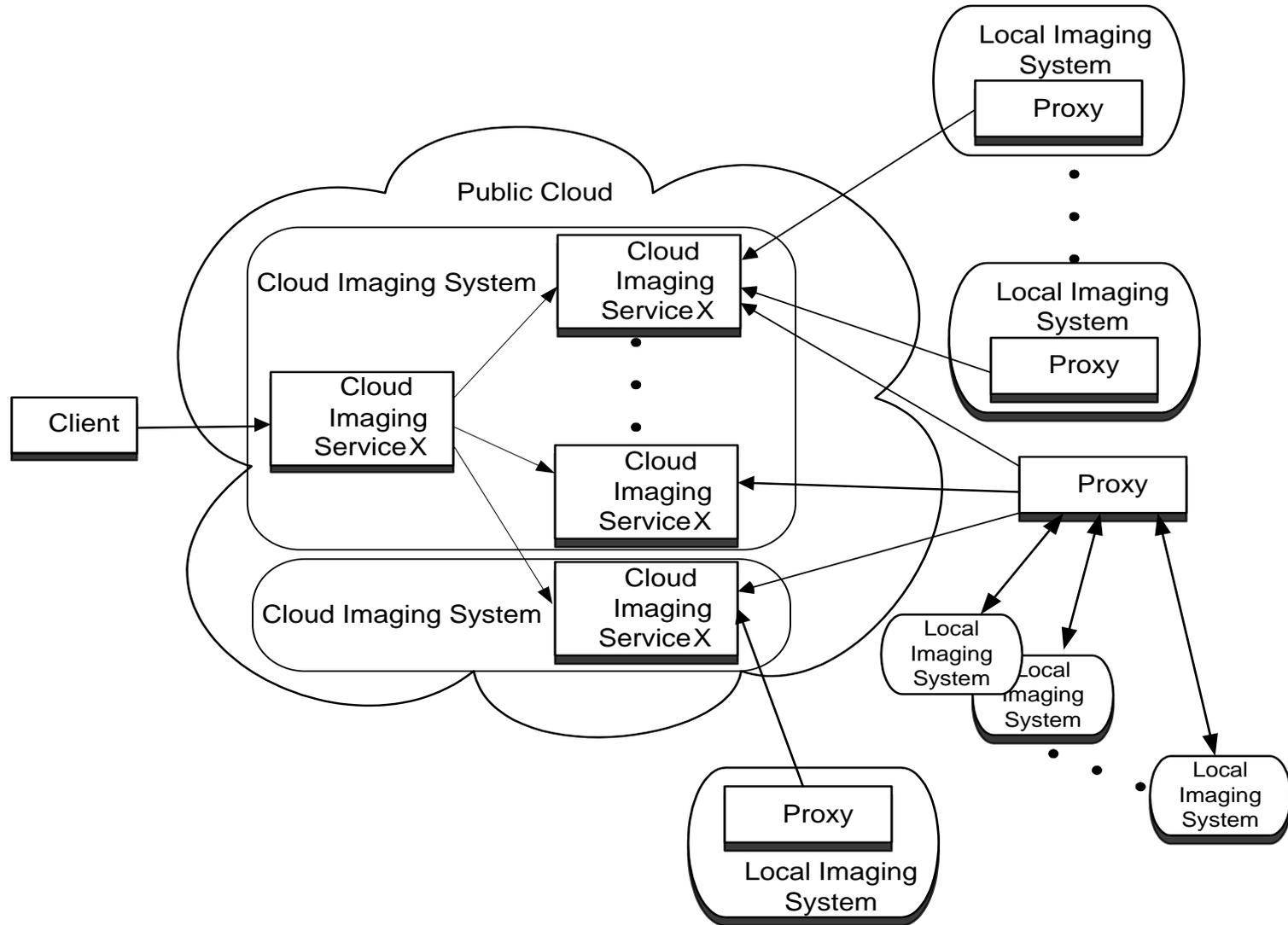


- The Cloud Imaging Model does not seek to replace any standard client-cloud interface, but outlines an approach to accessing non-cloud based imaging system from a Cloud-based service. It is recognized that this access may be associated with any sort of functional application (e.g., an editor, search machine, photo app), not just a application to allow printing of a document. Therefore, aspects such as User identification, security, billing, etc. are not specifically addressed.
- Why a Model?
 - Not binding-specific so that same basic approach could be used should preferred transport protocols change.
 - Allows a general view of the objectives.

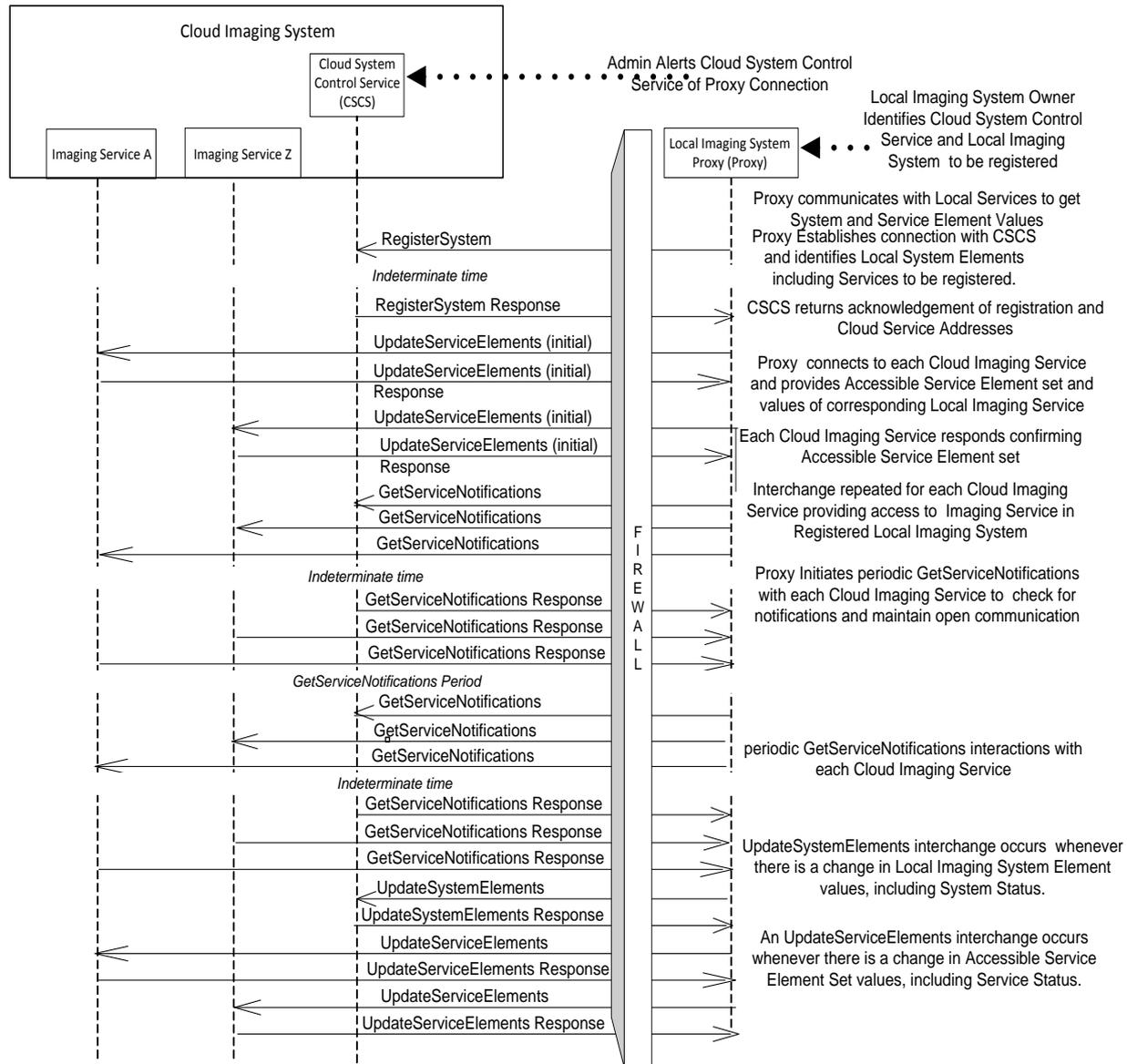
Spec Review – Block Diagram



Spec Review – Fanout

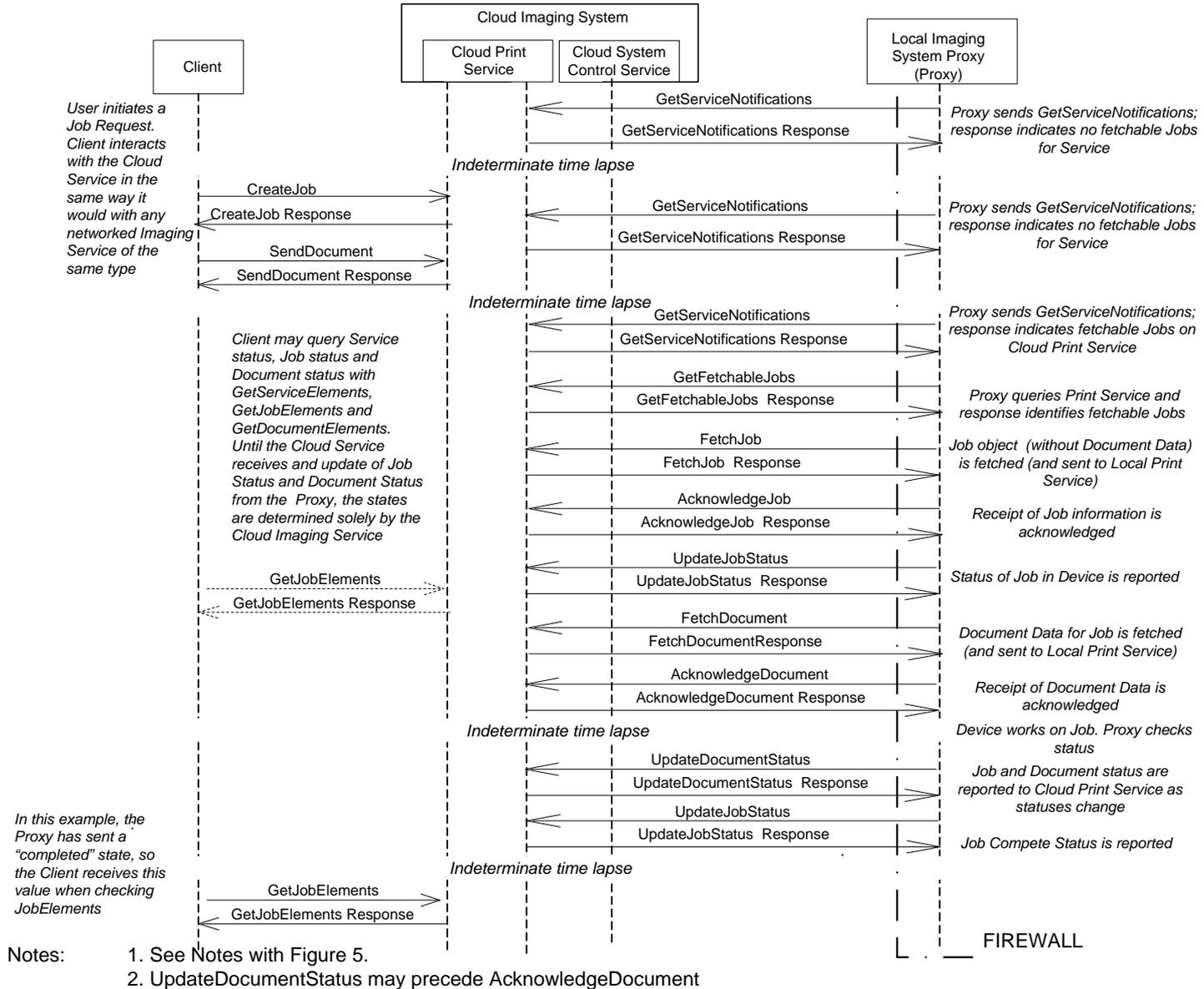


System/Service Registration

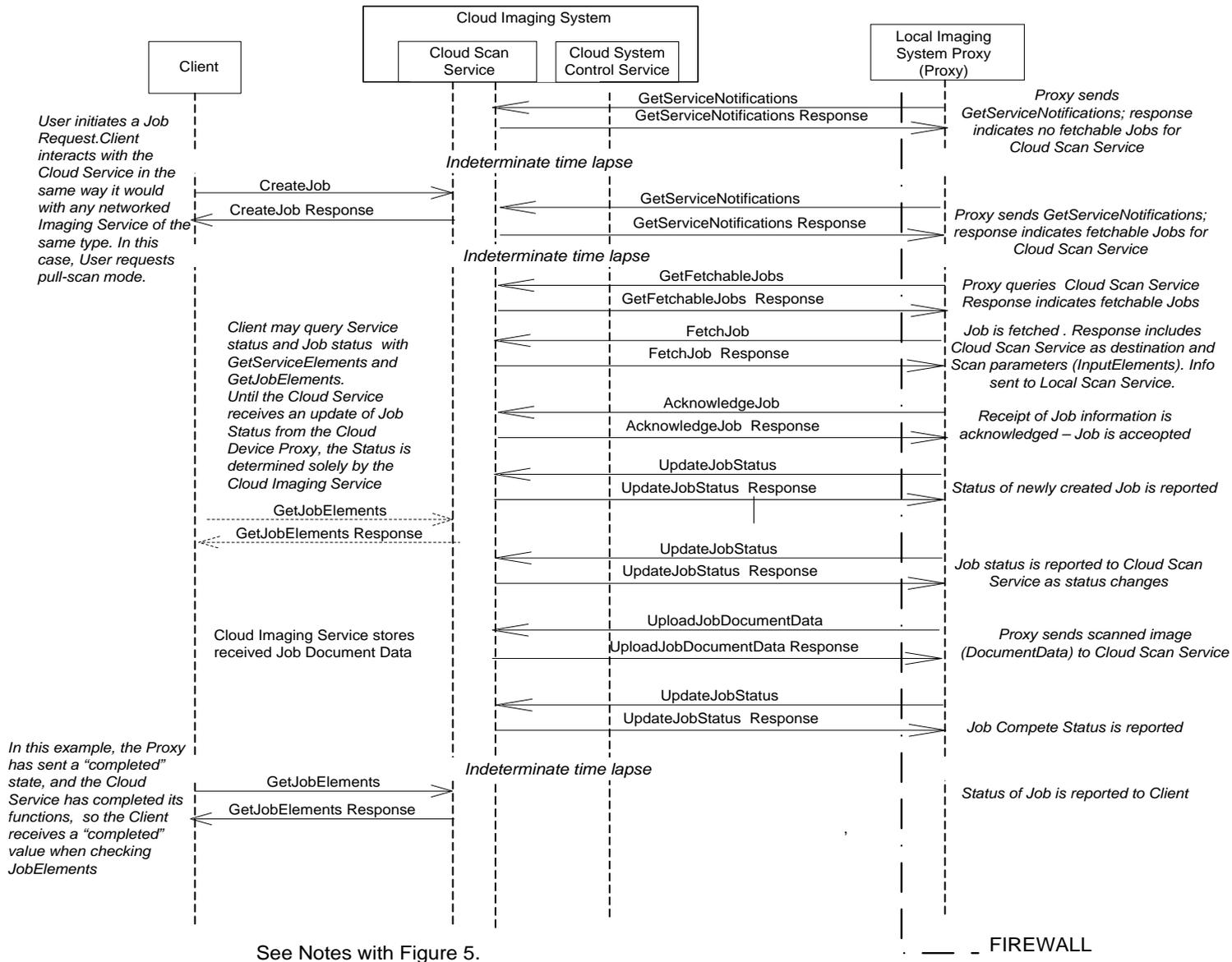


- Note: 1. All messages are initiated by the Local Imaging System Proxy.
 2. Every message has a response from the addressed Service.
 3. Proxy does not need to have a response from a previous message before sending a subsequent message.
 4. Services do not necessarily need to respond to messages in the order received.

Simple Print Sequence



Cloud Scan Sequence - Scan Document Data Sent to Cloud Service





Proxy to Cloud Operations

- AcknowledgeDocument
- AcknowledgeJob
- DeregisterSystem
- FetchDocument
- FetchJob
- GetFetchableJobs
- GetJobDocumentElements
- GetJobDocuments
- GetJobElements
- GetServiceNotifications
- RegisterSystem
- UpdateActiveJobs
- UpdateDocumentStatus
- UpdateJobStatus
- UpdateServiceElements
- UpdateSystemElements
- UploadJobDocumentData



- **VOTE on Model Spec!**
- Any further Projects?
- Pending discussion of newly identified issues or new project subjects, there are no further Cloud conference calls scheduled.
- The Cloud Mail list (cloud@pwg.org) will remain active.

Differences and Suggestions to SM WG (1 of 4) (Afternoon Session)



- The current Operations Schema (V1-185) lists operations separately for each Service (e.g., CreatePrintJob, CreateScanJob, etc). The Cloud Model relies upon the fact that most operations are common to multiple Imaging Services and, because operations are directed to a specific Service, does not need to include the name of the Service in the operation (e.g., CreateJob).
- The current Operations Schema (V1-185) defines Cloud oriented operations just for the Print Service. These should be expanded to all services, perhaps via a general Imaging Service complex Element.
- There have been additions to and changes in the Operations Schema (V1-185) Cloud oriented Operations. These should be reflected in SM3.

Differences and Suggestions to SM WG (2 of 4)



- Charset usage in SM:
 - SM has CharsetConfigured and CharsetSupported Elements but no Charset Element
 - There should be a note in SM 3.0 that WSDL binding passes charset in XML header for requests and responses but other bindings (e.g. IPP) pass a charset Element inline
- Current 2.9xx schema still has old services (e.g., EmailIn, EmailOut) that will not be documented in SM3. How will these be handled?
 - Remove from schema?
 - Include as an informative extension to the base schema?
- SM has uses “State” element relying on position to indicate what it refers to.
 - More desirable to use prefix in Element name indicating Document, Job, Service or System State.

Differences and Suggestions to SM WG (3 of 4)



- The current Semantic Model tends to use the same Element name for Boolean Elements indicating whether a capability is supported (e.g., MediaCol, KOctets) and the multivalued or Complex element that appears in Job and Document Processing.
- The current Schema uses the Element Name "Id" to refer to the identification integer of various things (including Service). Terms should have prefix (e.g., ServiceId).
- The current Schema uses Id + ServiceType to uniquely identify a Service within a System. ServiceUuid is a preferable term.
- The current Schema includes a DeviceId element, which is the 1284 Device ID but is considered to identify a Service. It might better correlate to a System ID, although a SystemUuid should be added (as well a LocalSystemUuid)

Differences and Suggestions to SM WG (4 of 4)



- It is preferable to use the Element Name “Document” instead of ImagingDocument
- The original Add<service>HardcopyDocument operation required InputSource as a mandatory Element. AddHardcopyDocument is replaced by consideration of IPP FaxOut binding with AddDocumentImages, a more general operation. In this operation, InputSource is replaced by the more general InputElements (input-attributes in IPP) which is not mandatory IPP. The Add<service>HardcopyDocument to AddDocumentImages change should be made to the Semantic Model Operations. It should be considered as to whether InputElements is a mandatory Element.