LIDC Conversion to AIM Meeting Notes 2009-06-23

LIDC AIM Telconv Notes
Tuesday, June 23, 2009
LIDC Call with additional participants

Pat Mongkolwat explained DICOM Segmentation Object:
Binary: is each voxel included - 0 or 1
Fractional: - two types -
1) probability (%)
2) occupancy (% of the voxel occupied by tumor)

LIDC PMAPS:
1. No readers - score 0
2. 1 reader (out of four) = ¼
3. Denominator is number of readers who thought it was a nodule.(depends on number of readers)

How will we validate the AIM LIDC data?
Chuck - do analysis of the data... (not necessary to visualize) to test...
Tony Reeves - also could use the Cornell web tool.... (have all the public cases on their site)
QIWS testing: UCLA or Chicago. (maybe Roger)

Action on PMAP -

Pat - AIM assumes a DICOM object... w/o a DICOM segmentation object then it won't work.
Channin - can you create a DICOM representation of the pmap?
DICOM objects now exist for segmentation...

Proposed scenario: In annotationofannotation, have the segmentation object associated with the annotation.
The pmap in xml gets converted to a dicom object... (by Qinyan Pan - we will have to ask her to assess the technical difficulty of this.
1) find the appropriate DICOM supplement - to see how much work is involved in converting a DICOM object from the pmaps...
DICOM segmentation objects may not be widely accepted yet...
.. but what are you going to do otherwise..we should add segmentation support to "XIP"workstation requirements

Still some questions about DICOM segmentation objects:
We should add the DICOM segmentation objects
DICOM part 3 p. 828 - 8.20 ...
Mike McN - is the LIDC meaning the same as "only a proportion of that voxel
DICOM - does it mean, for example, 75% fat
Mathematically it works but do the semantics work? We would need to make the semantics clear "segmented property"
Worse case: submit a change proposal to DICOM to create 3rd type.

Imaging:Here is the DICOM specification document for DICOM segmentation objects.