MIM ProtégéAI Demo (9/24/2020)

Presenters:

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* Dana Delrosario

ProtégéAI is an OAR auto-segmentation service that uses deep learning algorithms run by MIMapp Catalyst. It retains the time savings of ABS but is, of course, more robust.

ProtégéAI is cloud based. It uses MIMcloud for data storage and transfer. (MIMcloud uses AWS and Google Cloud.) MIMapp Catalyst is the cloud-based service, housed within MIMcloud, that obtains the data from MIMcloud, runs the deep learnings algorithms, and returns the structures to MIMcloud.

MIM regularly performs security vetting. IT can be averse to cloud-based solutions. ☺

All data stored in MIMcloud is encrypted, and PHI is scrubbed. Other institutions cannot access the training data—just the contouring results.

Data flow:

1. sim CT/MR acquired
2. local MIM 7
3. institution MIMcloud group
4. Contour ProtégéAI autosegmentation
5. local MIM 7

Steps 3 & 4 are fully automated w/ MIM Assistant.

MIM 7 or above is required for ProtégéAI, so we’d have to upgrade our 6.9.3.

There are currently four models—liver, prostate, H&N, and thorax—each of which contains just a few contours. Multiple models can be applied to the same plan; this often done with the liver model, which only contours the liver. Once ProtégéAI received FDA approval, more contours and models will be added.

The contours in the demo look really good, a lot like what RayStation’s MBS does. Unlike RayStation’s MBS, though, ProtégéAI uses TG-263 naming…

There are two options for getting access to ProtégéAI. We can add it to what we already have. This is the most expensive solution. There’s also the departmental solution, which includes unlimited license usage, MIM Assistant, MIMcloud, ProtégéAI, etc. If we agree to share anonymized patient data to feed future iterations of the auto-segmentation algorithm, we get ProtégéAI free for the length of our MIM service contract. Dana can do a trial with us for either or both options.

Installation is simple and takes about two hours; they only need either a physics or IT contact (probably IT for us…). It is not an issue that we don’t have a MIMcloud license.

They are sending us:

* IT one-sheet: Overview of data flow and data capture
* Draft of a whitepaper, as yet unpublished, describing what happens “under the hood” of ProtégéAI
* Quotes for both options, as discussed above
* Information on how ProtégéAI compares to RayStation’s MBS