Web-based Imaging Uploader for LORIS

Z. Mohaddes, L. MacIntyre, S. Das, C. Madjar, R. Gnanasekaran, D. MacFarlane, N. Brossard, C. Rogers, A.C. Evans
McConnell Brain Imaging Centre, Montreal Neurological Institute, McGill University, Canada

INTRODUCTION

In recent years, the neuroimaging community has been harnessing the power of large data sets. For imaging studies, transferring data often includes labour intensive tasks that incur a cost in efficiency and reliability. These time consuming procedures tend to further delay important steps, such as quality control (QC), processing and analysis.

The LORIS Solution:

LORIS is a web-based data and project management software that supports data acquisition and analysis within a multi-site project. Developed at the McGill Centre for Integrative Neuroscience (MCIN), the LORIS platform supports imaging, behavioural, clinical and genetic data.

A user-friendly Imaging Uploader has been implemented. Coupled with a suite of web-based imaging tools, this module provides an intuitive, secure and highly customizable method for uploading imaging data for any given study.

FEATURES/BENEFITS

The Imaging Uploader’s main functionality is to provide users with a simple, intuitive way to upload imaging datasets via a web browser into the LORIS database. To accomplish this goal, it also incorporates a number of features to facilitate this process:

1. Real-time progress indicator
2. Anonymization verification
3. Scan integrity validation
4. Several file format converters
5. Flagging of protocol violations
6. Authentication and access control
7. Mobile-friendly interface
8. Comprehensive logging
9. Metadata display of images
10. Web-based visualization
11. Granular QC validation tools
12. Real-time statistics
13. Radiological Review module
14. DICOM Browser
15. Comprehensive user control
16. Fully customizable processing pipeline

METHODS

HOW TO USE THE IMAGING UPLOADER

1: Web Upload

Upload compressed packages of scans for the given patient.

2: Validation

Upon upload, data are flagged and checked for study protocols and scan parameters.

3: Visualization

Once validated, the scans can be viewed in the Brain Browser and assessed for quality control purposes.

RESULTS


CONCLUSION

Used in numerous multi-site neuroimaging studies, the Imaging Uploader provides a reliable, secure and efficient method for web-based data transfer, that includes a robust storage solution with comprehensive logging and validation.

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