Report from 2015 OHBM Hackathon (HI)

LORIS: DICOM Anonymizer

Project URL: http://github.com/aces/DICOM_anonymizer

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1 Introduction

The purpose of this Brainhack project was to create a simple application, with the least dependencies, for anonymization of DICOM files directly on a workstation.

Anonymization of DICOM datasets is a requirement before an imaging study can be uploaded in a web-based database system, such as LORIS[1]. Currently, a simple and efficient interface for the anonymization of such imaging datasets, which works on all operating systems and is very light in terms of dependencies, is not available.

2 Approach

Here, we created a DICOM anonymizer that is a simple graphical tool that uses PyDICOM package to anonymize DICOM datasets easily on any operating system, with no dependencies except for the default Python and NumPy packages. DICOM anonymizer is available for all UNIX systems (including Mac OS) and can be easily installed on Windows computers as well (see PyDICOM installation). The GUI (using tkinter) and the processing pipeline were designed in Python. Executing the anonymizer_gui.py script with a python compiler will start the program. Figure 1 illustrates how to use the program to anonymize a DICOM study.

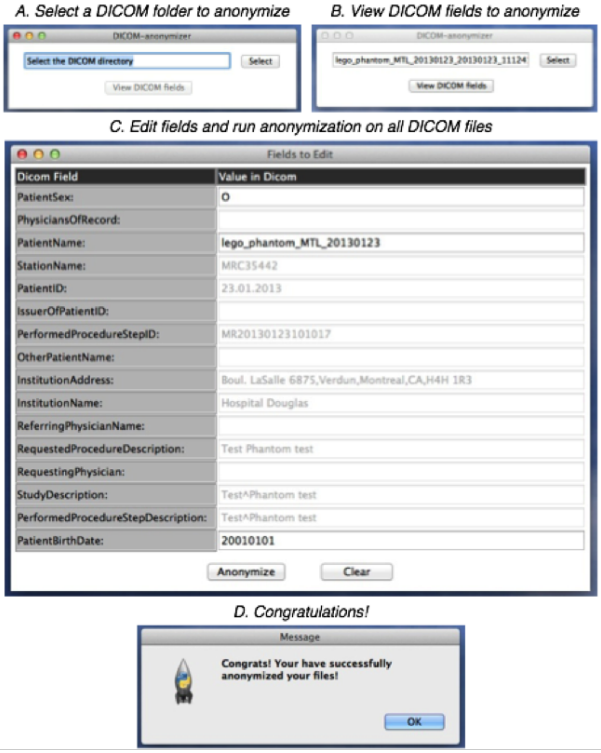

Figure 1 How to use the DICOM anonymizer step by step.

3 Results

This graphical tool, designed to be easy-to-use, platform independent and have minimum dependencies, produces two zip files. One zip file includes the original DICOM files and the other contains the anonymized DICOM outputs.

4 Conclusions

The DICOM anonymizer is a simple standalone graphical tool that facilitates anonymization of DICOM datasets on any operating system. These anonymized studies can be uploaded to a web-based database system, such as LORIS, without compromising the patient or participant's identity.

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Availability of Supporting Data
More information about this project can be found at: http://github.com/aces/DICOM_anonymizer. Further data and files supporting this project are hosted in the *GigaScience* repository REFXXX.

Competing interests
None

Author's contributions
SD, CM, AS, and ZM wrote the software and the report.

Acknowledgements
The authors would like to thank the organizers and attendees of the 2015 OHBM Hackathon.

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