

APPENDIX XII - DIGITAL DATA SUBMISSION PROCEDURES TO QARC

A DIGITAL DATA FORMAT

For digital data submission, an institution's treatment planning system must have the capability of exporting data in one of two formats:

- RTOG Data Exchange Format, Version 3.20 or later (specifications at http://itc.wustl.edu/exchange_files/tapeexch400.htm); or
- DICOM 3.0 in compliance with the ATC's DICOM 3.0 Conformance Statement

The commercial systems that are known to have this capability are listed on the ATC website (http://atc.wustl.edu/credentialing/atc_compliant_tps.html).

The capability for QARC to accept digital RT data using the method described below has been developed with the Advanced Technology Consortium (NIH grant CA81647).

Institutions may submit treatment planning data in one of these formats on a CD or electronically via ftp to QARC. Institutions must obtain a username and password for submission of data via ftp. To request an FTP account, please complete the FTP Account Request Form (available at www.qarc.org/DigitalData/FTPAccountRequest.pdf) and email it to ATCDICOMRT@QARC.org. Please include your name and your institution's name and address as well as the best way to contact you (i.e. phone number, e-mail address, etc.). Allow 3 business days to process your account request.

Contact QARC at ATCDICOMRT@QARC.org or 401-454-4301 if you have any questions.

B SUBMITTING DIGITAL DATA VIA THE INTERNET

Digital treatment planning data in RTOG Data Exchange or DICOM RT format can be submitted to QARC over the Internet using FTP. Effective April 9, 2007, the QARC FTP server uses Secure FTP (SFTP). Secure FTP (SFTP) uses the SSH network protocol and offers several advantages over FTP, including secure (encrypted) transport of usernames, passwords, and data, and compatibility with most firewall configurations.

Please use the following steps to submit data via SFTP:

1. Complete the FTP Account Request Form and e-mail it to ATCDICOMRT@QARC.org to obtain an FTP account.
2. QARC's SFTP address is [ftpatc.qarc.org](ftp://ftpatc.qarc.org) (current IP address 204.17.95.243).
3. For many users, the SFTP upload procedure is essentially the same as for FTP, except that a new SFTP client may be needed. SFTP client software, both commercial and open-source, is broadly available. Windows clients include WS_FTP Professional (commercial), FileZilla (free/open-source) and WinSCP (free/open-source). For Linux systems, both graphical (gftp) and command-line (sftp) programs are included with most distributions.
4. Instructions for configuring SFTP clients (WS FTP Pro, Filezilla, WinSCP3, and Linux sftp) are available at <http://www.qarc.org/DigitalData/InstructionsForConfiguringSFTPclients.pdf>.
5. Problems in connecting to the QARC SFTP server, may be caused by your institution's firewall configuration. An outbound connection from your computer to TCP Port 22 on host [ftpatc.qarc.org](ftp://ftpatc.qarc.org) is required. (Although allowing such a connection is considered safe, it is sometimes disallowed by default.) Please consult you local firewall/network administrator.

6. Instructions for Specific Treatment Planning Systems are linked below:
 - CMS/XiO: See instructions at <http://www.qarc.org/DigitalData/SFTPSubmissionToQARCFromCMSXiO.pdf>.
 - Philips/Pinnacle - Contact Philips support for help in installing command-line SFTP client
7. Once you are connected to the QARC SFTP server, change to the “incoming” directory. (CD incoming)
8. Create a new sub-directory within “incoming” with a name that is pertinent to the data that you are submitting (mkdirCase01423totalplan). Please do not use spaces in directory names or filenames.
9. Send e-mail to ATCDICOMRT@QARC.org to indicate that you have uploaded protocol case data. Please identify the study group, protocol, and case number for the submission as well as your contact information.
10. In order for QARC to confirm that your data has been received and imported correctly, please send images showing structures and the dose distribution in three orthogonal planes along with total dose DVHs. These may be screen dumps sent via e-mail as jpeg, bitmap, or tiff files or they may be hardcopies mailed to the QARC.

Please see Appendix XI for the complete list of quality assurance materials to be submitted and the required timelines.

C- SUBMITTING DIGITAL DATA VIA CD

Digital patient treatment planning data may be written to CD and the CD mailed to QARC. Most scanners have the option to write patient studies to CDs in DICOM. If you have a PACS system, you should be able to choose to export studies to a CD in DICOM format; this is the preferred method of submission. Some PACS systems may export studies only in their proprietary format; these are acceptable only if the viewer is also included on the CD.

Please follow the next instructions to submit data via CD:

1. Be sure to label the CD with the study group, protocol, and case number.
2. Include only one patient per CD. You may send multiple studies for one patient on each CD.
3. Do not send diagnostic imaging as .jpg, .bmp, power point, or any other non-DICOM format, as the ability to window, level and measure is lost.
4. In order for QARC to confirm that your data has been imported correctly; please include hardcopies showing structures and the dose distribution in three orthogonal planes along with total dose DVHs and send to the QARC. These may be sent to QARC (FTP, e-mailed or mailed on a CD) as screen captures saved as an image file (jpeg, bitmap, tiff) and/or scanned documents.

Please see Appendix XI for the complete list of quality assurance materials to be submitted and the required timelines.