

Advanced Technology QA Consortium  
DICOM Workshop

# Data Submission Issues

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## Submission Mechanisms for DICOM Objects

- FTP of DICOM Part 10 files to [castor.wustl.edu](http://castor.wustl.edu)
- DICOM Part 10 CD-R (ITC DICOMpiler)
- Secure upload using RCET WebSys client

# Submission Using FTP

- In use by 200+ clinical sites
- Each institution is assigned a separate FTP account (e.g., rtog-wustl) and password.
- To submit data, participants<sup>1</sup>
  1. Log in to FTP server on host `castor.wustl.edu`
  2. `cd /incoming`
  3. Create new directory: `mkdir case0223`
  4. `cd case0223`
  5. Upload data in binary mode

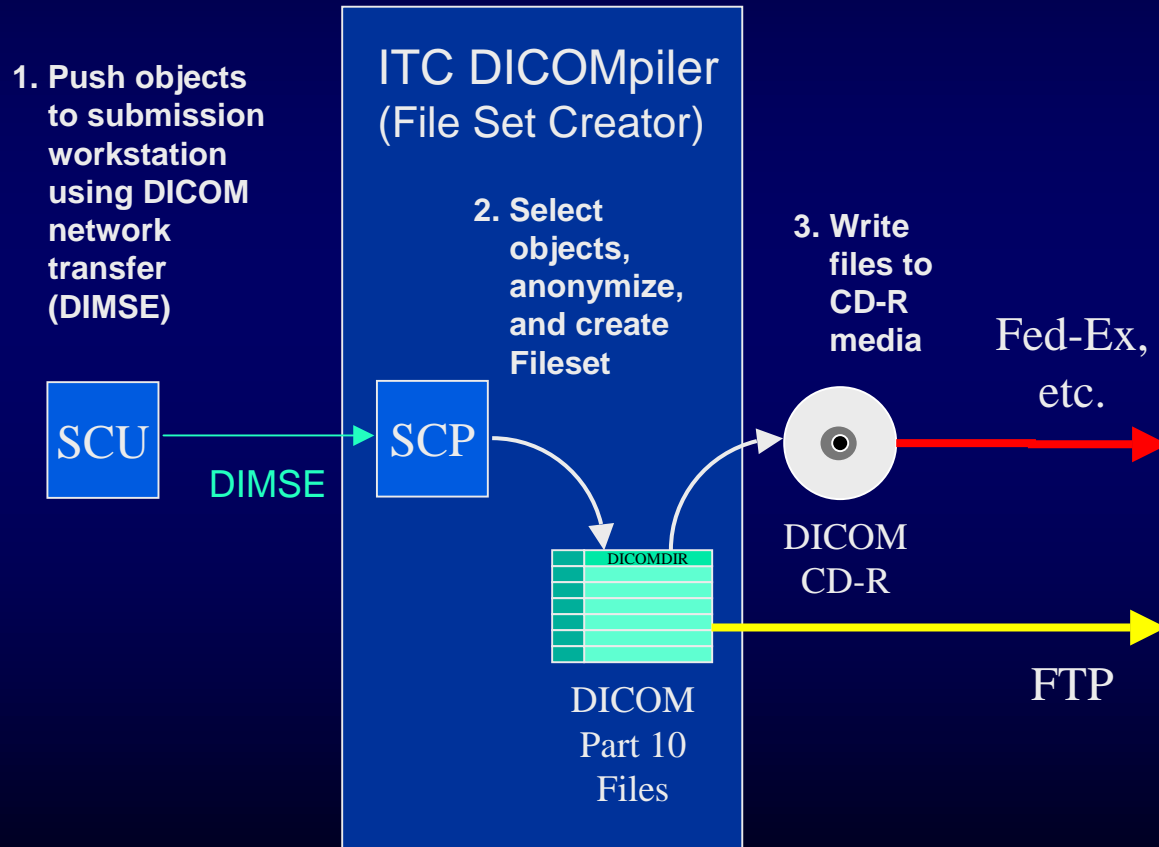
# Part 10 File Submission Using ITC DICOMpiler

- Features

- DICOM network (DIMSE) receiver
- GUI series selector
- De-identifier
- Part-10 File Set Creator
- Output: File Set ready to burn on CD-R

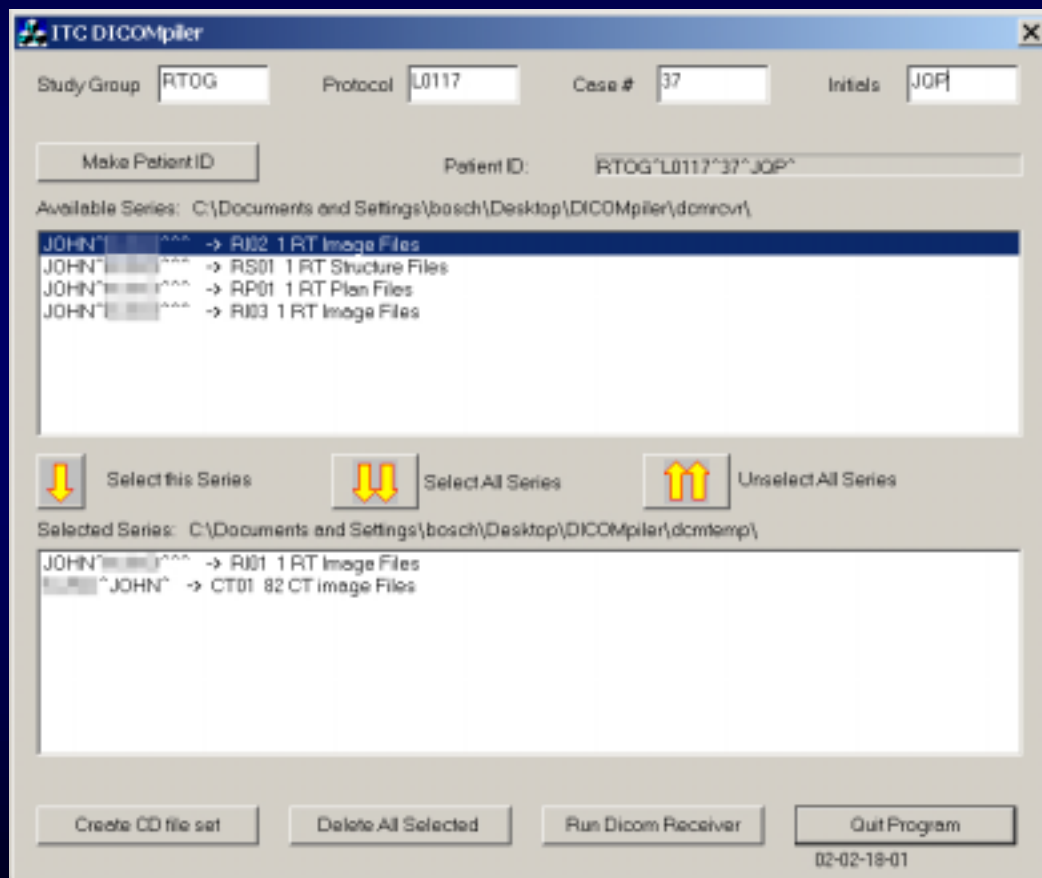
- Windows Application

- Available from ITC web site  
<http://itc.wustl.edu>



# ITC DICOMpiler

- User interface for series selection and case ID input
- Replaces personal identifiers with case ID (one patient per file-set)
- File Set Creator creates Part 10 file set with DICOMDIR (ready to be written to CD-R)



# ITC DICOMpiler Patient De-Identification

Attribute	Tag	Action
Patient's Name	0010,0010	Replace with Case ID: SPONSOR^PROTOCOL^CASE^INIT^
Patient ID	0010,0020	Replace with Case ID: SPONSOR^PROTOCOL^CASE^INIT^
<b>Patient's Birth Date</b>	<b>0010, 0030</b>	<b>Replace with NULL</b>
Patient's Birth Time	0010, 0032	Remove attribute
Patients Sex	0010, 0040	Remove attribute
Other Patient Names	0010, 1001	Remove attribute
Other Patient IDs	0010, 1000	Remove attribute
Ethnic Group	0010, 2160	Remove attribute
Patient Comments	0010, 4000	Remove attribute

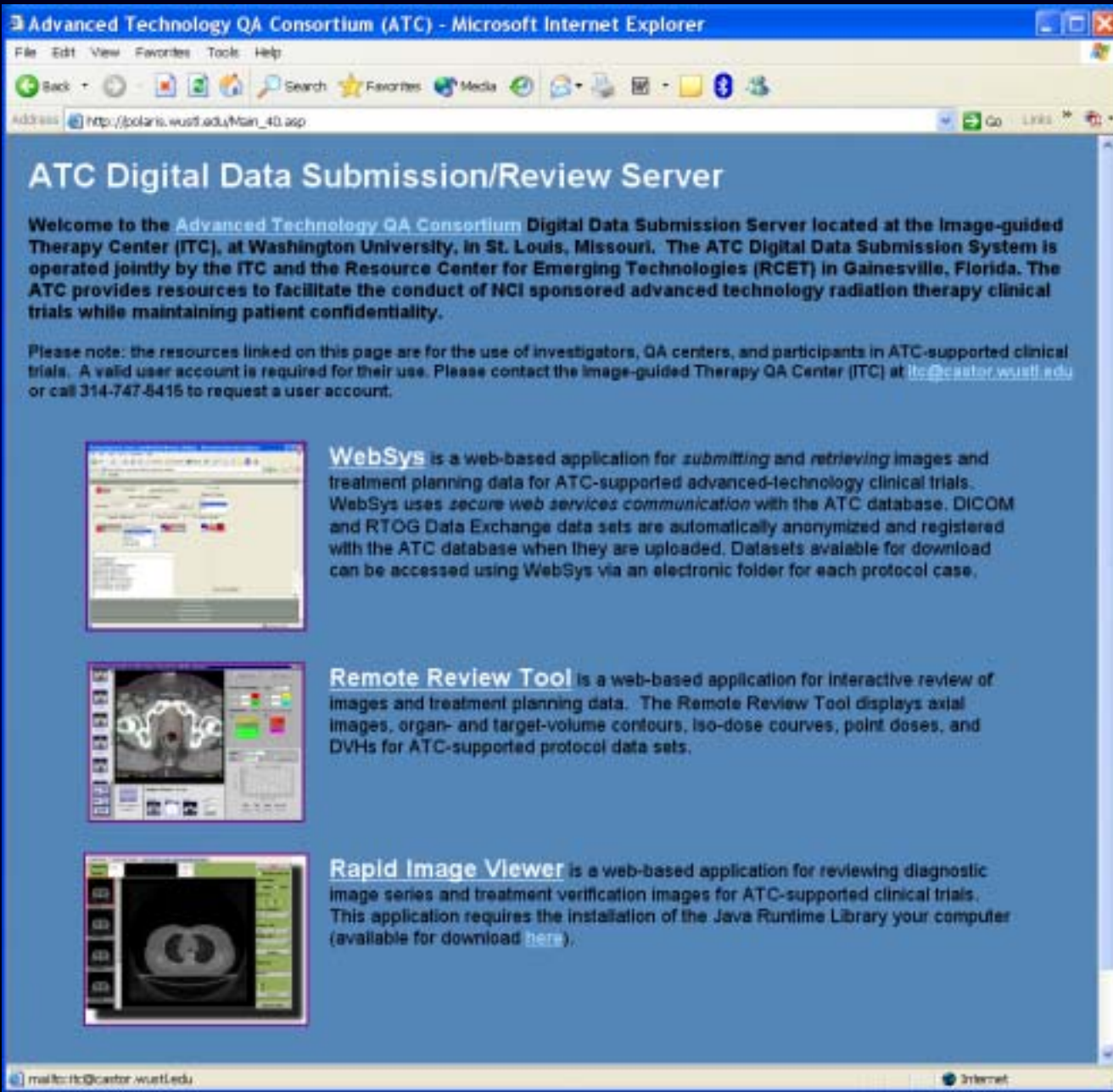
# Data De-identification Issues

- Patient names can appear in unexpected places
  - Structure Set Label (3006,0002)
  - Structure Set Name (3006,0004)
  - Structure Set Description (3006,0006)
  - RT Plan Label (300A,0002)
  - RT Plan Name (300A,0003)
  - RT Plan Description (300A,0004)

## ATC Digital Data Submission Server

Provides links to

- WebSys – secure upload/download
- RRT – image segmentation and dosimetry review
- Rapid Image Viewer – diagnostic image display



Advanced Technology QA Consortium (ATC) - Microsoft Internet Explorer

File Edit View Favorites Tools Help


Back Forward Stop Refresh Home Search Favorites Media

Address http://polaris.wustl.edu/Main\_40.asp


### ATC Digital Data Submission/Review Server

Welcome to the [Advanced Technology QA Consortium Digital Data Submission Server](#) located at the Image-guided Therapy Center (ITC), at Washington University, in St. Louis, Missouri. The ATC Digital Data Submission System is operated jointly by the ITC and the Resource Center for Emerging Technologies (RCET) in Gainesville, Florida. The ATC provides resources to facilitate the conduct of NCI sponsored advanced technology radiation therapy clinical trials while maintaining patient confidentiality.


Please note: the resources linked on this page are for the use of investigators, QA centers, and participants in ATC-supported clinical trials. A valid user account is required for their use. Please contact the Image-guided Therapy QA Center (ITC) at [itc@ecantor.wustl.edu](mailto:itc@ecantor.wustl.edu) or call 314-747-5415 to request a user account.



**WebSys** is a web-based application for *submitting* and *retrieving* images and treatment planning data for ATC-supported advanced-technology clinical trials. WebSys uses *secure web services communication* with the ATC database. DICOM and RTOG Data Exchange data sets are automatically anonymized and registered with the ATC database when they are uploaded. Datasets available for download can be accessed using WebSys via an electronic folder for each protocol case.



**Remote Review Tool** is a web-based application for interactive review of images and treatment planning data. The Remote Review Tool displays axial images, organ- and target-volume contours, iso-dose curves, point doses, and DVHs for ATC-supported protocol data sets.



**Rapid Image Viewer** is a web-based application for reviewing diagnostic image series and treatment verification images for ATC-supported clinical trials. This application requires the installation of the Java Runtime Library your computer (available for download [here](#)).

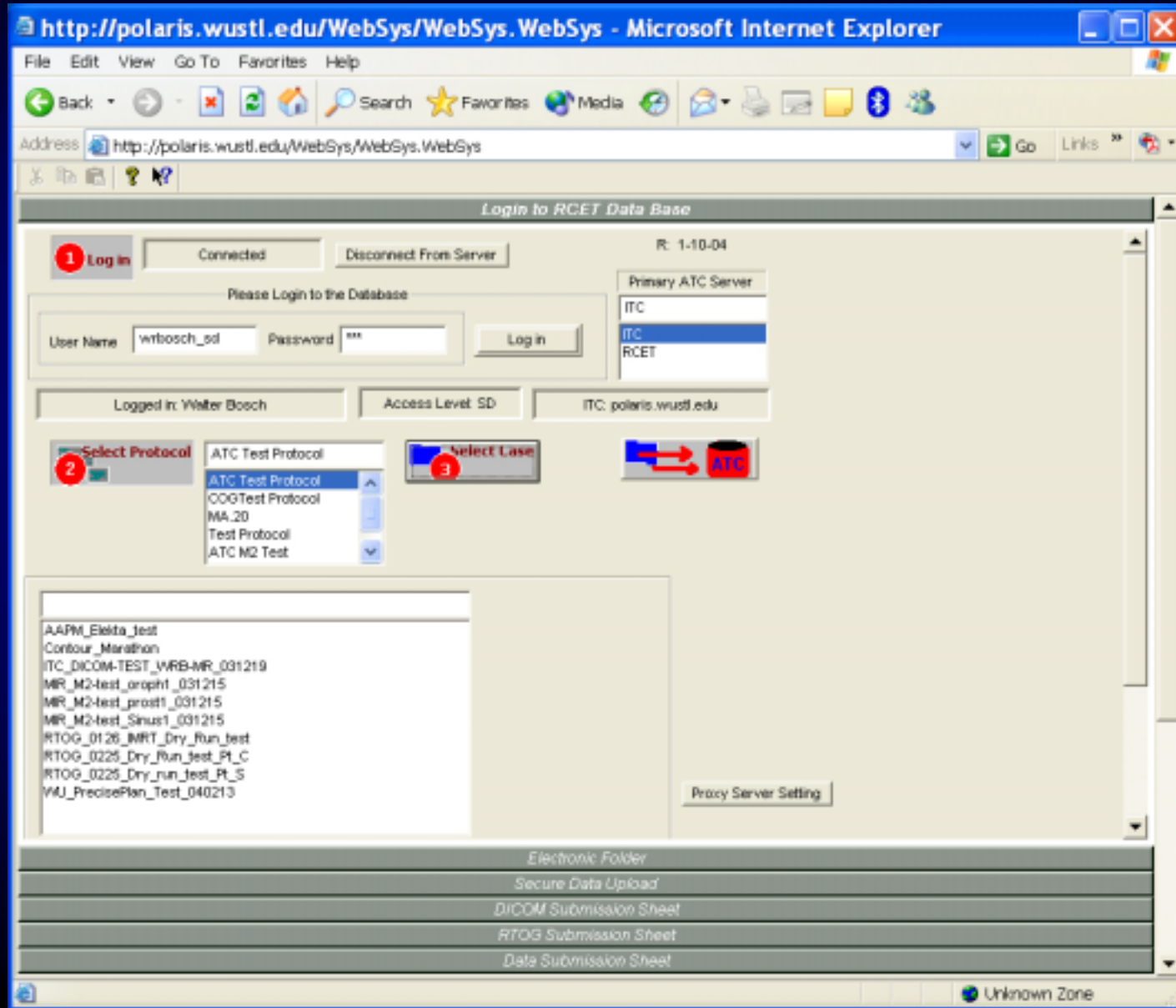
mailto:itc@ecantor.wustl.edu

Internet



# WebSys

- Secure upload of images and treatment planning data
- Supports DICOM and RTOG Data Exchange format
- Images and data are anonymized and encrypted prior to upload



# WebSys

- Secure download of data
- Access restrictions: own data (user), entire protocol (study director)

Case Information

Case ID	Patient Real Name	Creation	Last Updated	Events Dates
ITC_WRB-MR_031219	N/A	12/19/03	N/A	Action Date: N/A

Messages: 72672C  
 Update

Created By: Walter Bosch  
 Submitted from: RCET

CT	MR	US	SC	CR	Portal	RTDG	DICOM-RT
Case Description	Set Description	Num DICM Objs	Submission Date	Status			
N/A/hip/TSE_T1_TRA	N/A	20	12/19/03	03/1			
N/A/TSp_Myelopathy_BUC/scout	N/A	5	12/19/03	03/1			
N/A/TSp_Myelopathy_BUC/scout	N/A	5	12/19/03	03/1			
N/A/TSp_Myelopathy_BUC/T1_SAG	N/A	9	12/19/03	03/1			
N/A/TSp_Mets_Bone_BUC/scout	N/A	5	12/19/03	03/1			
N/A/hip/PDFS_COR_TIR	N/A	18	12/19/03	03/1			
N/A/hip/T1_COR	N/A	20	12/19/03	03/1			
N/A/hip/T1_TRA	N/A	30	12/19/03	03/1			

Secure Data Upload  
 DICOM Submission Sheet  
 RTDG Submission Sheet  
 Data Submission Sheet

## Method 2 (in development): Digital Data Submissions to ATC

