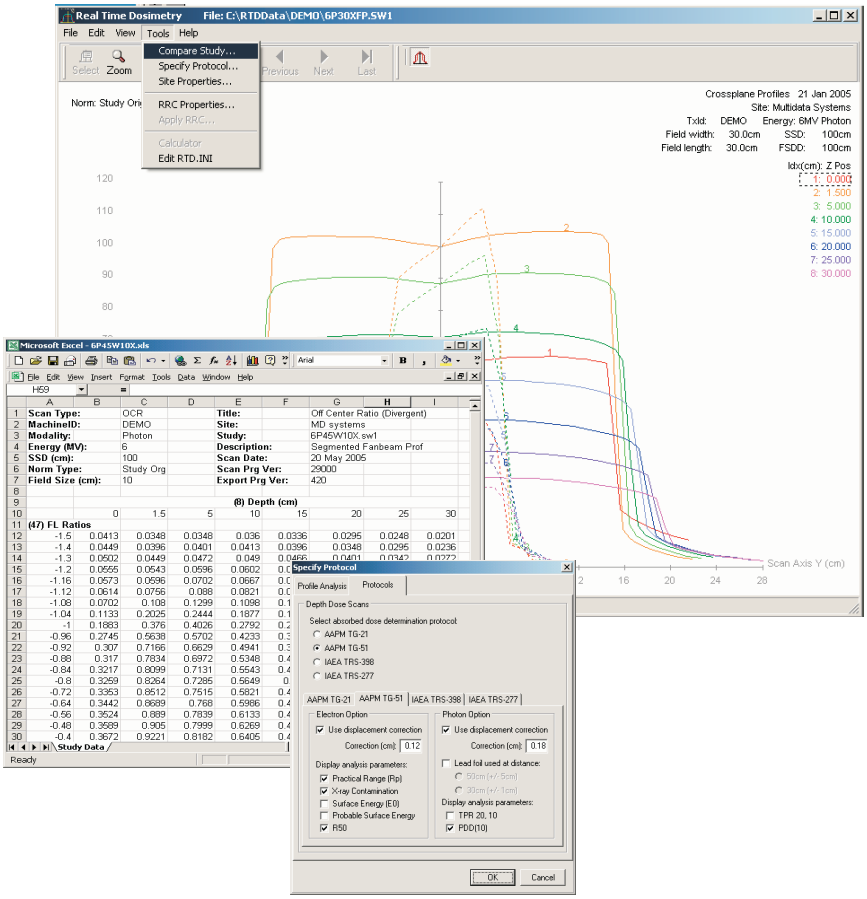
RTD
Realtime
Dosimetry

RTD Software Overview

Beam Data Management Software
for Data Acquisition, Analysis & Processing

Water, In-Air & Film-based Dosimetry



Simply Smarter

MULTIDATA www.multidata-systems.com

RTD
Realtime Dosimetry

Better Organized
With RTD Beam Data Acquisition and Management

The RTD Realtime Dosimetry software allows data acquisition and processing within one software environment. Various scanning devices such as waterphantom, film scanner, in-air scanner etc. may be connected and the data acquired from the various devices displayed, edited, reformatted, compared etc., all within the RTD environment. Commissioning datasets maybe readily compared with periodic QA datasets, and subsets of measured or constructed datasets extracted and exported for other purposes.

Convenient Functionality for Effective Organization

- Data management by “drag and drop” with Windows Explorer type file handling
- Data organization per the user’s preference, such as by treatment machine, scanning project or date
- Compare, process and print data sets acquired in water, in air or from film from within one application
- Select or organize data automatically using 14 scan attributes
- Windows-style Clipboard functions allow cutting, copying and pasting scans between studies and for building tables of measured data from separate studies
- Measured or assembled studies can be exported to Excel
- Data sets from other systems can be imported for analysis, comparison and further processing using the ‘Import from Excel’ function

Better Equipped
With Scanning Devices for the Physics Professional

- The High Resolution Waterphantom Series from Multidata delivers repeatable 0.1mm scan resolution - for the most demanding of scanning projects
- RTD scanning devices are completely software controlled (not Micro-processor controlled) for direct control of scanning
- 9855 software-controlled Dual Chamber Electrometer with exceptional dynamic range and independent signal conditioning
- Real-time display of probe position and signal intensity
- Single USB connection to computer, simple interface for all scanning devices (acquisition from film, in-air scanner, waterphantom etc.)
- Scanning session setup via software with easy click-on, click-off check boxes allows the user to quickly adjust the scanning setup
- Software-driven definition of the scan coordinate system, automatic device and radiation field center detection, positional self-calibration
- Dose integration at each specific data point for exact and repeatable results. No ‘noise’ or signal artifacts in measured curves

Better Prepared

With RTD Acquisition Plans and Studies

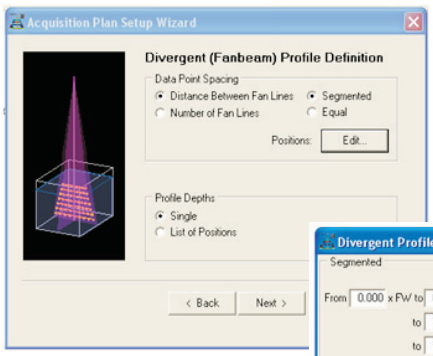
Effective scanning preparation is the basis for an effective and efficient scanning session. RTD offers reusable scanning templates called ‘acquisition plans’ and provides for the organization of scanning files by treatment machine or scanning project folders.

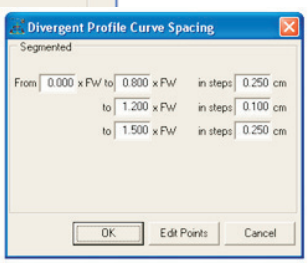
Effective Scanning Preparation with RTD

- Proven ‘acquisition plan’ (scanning template) methodology
- Interactive editor for setting up new and modifying existing acquisition plans
- User-friendly wizard available as guide during the acquisition plan definition process
- Series of related scans defined together in ‘studies’ for more efficient scanning
- Indexing and invert index functions allows organization of scans within the study files for optimal sequencing for the scanning session and a different organization for post-scanning data processing

Beam Data Management Software

For Data Acquisition, Analysis & Processing



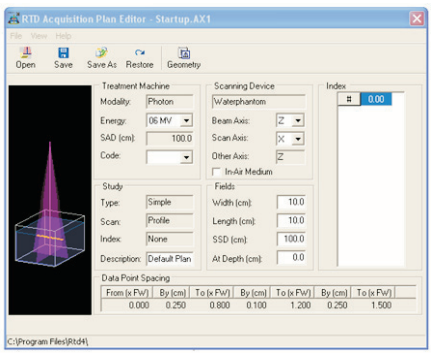


The acquisition plan wizard guides the user step by step in the creation of acquisition plans. Study type, scan setup geometry, scanning grid type and resolution, indexing properties and other parameters are recorded and the template generated.

The scanning grid spacing and resolution can be selected and the scanning position list automatically generated.

The acquisition plan editor offers an alternative to the wizard for editing existing templates including saving edited plans as new acquisition plans.

The acquisition plan parameters are displayed in an interactive dialog and can be readily updated.

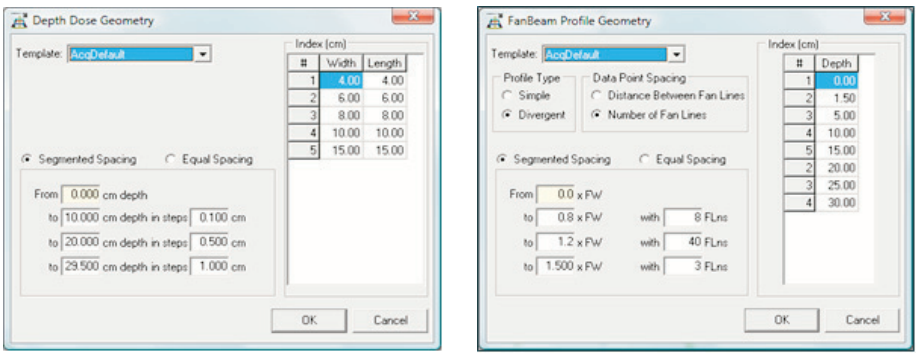


RTD
Realtime Dosimetry

Better Data
Extensive Data Analysis & Post-Scanning Processing Features

In addition to analysis and scan editing tools, RTD offers extensive reformatting functions to allow existing datasets to be (re)organized to match the dataset specifications for various applications. Because individual scans are related together in a three dimensional dataset, the measured dataset can be 'virtually re-scanned', extracting a new scan dataset by applying different acquisition plan parameters. A new scan position geometry or grid resolution may be applied, and curves at additional depths or for other field sizes interpolated.

For example, to create a dataset for a treatment planning system, an existing, complete dataset may be 'rescanned' with a new scan grid geometry and scan point resolution as specified by the TPS manufacturer. Furthermore, 'missing' data points, or event entire scans for additional depths or fieldsizes may be generated to create a new dataset compliant with the TPS data specifications.



A new scan point grid can be applied to a measured data set and a modified study derived. Missing positions and intensity values are automatically interpolated.

RTD Scan Data Processing Features

- Process data sets acquired in water, in air or from film in one application
- Convenient and intuitive data management tools with Explorer-type view for scan/study organization, 'drag and drop' file handling and one-click scan sorting by scan/study attributes
- Clipboard style cutting, copying and pasting of scans between studies to build tables of measured data from different studies
- Interpolation and extraction of new scan/datasets from scanned data
- 'Rescan' an existing scanned data set by applying new acquisition parameters. Derive scans at additional depths between the measured depths or with a new scan point geometry or grid resolution. For example, apply a divergent (fanbeam) point geometry to a scan previously measured with a rectilinear scan point (grid) geometry.
- Scan processing tools such as Flip Curve, Fit Curve, Shift Origin, Adjust data, Scale data, Apply Offset, Average Left to Right, Copy Left to Right & more
- 'Create PDF' function for electronic documentation of scans currently displayed on screen

Simply Smarter

MULTIDATA www.multidata-systems.com