AbstractID: 9710 Title: A Computer Program to Manage Dosimetry Data and to Verify Monitor Unit of Treatment Planning System

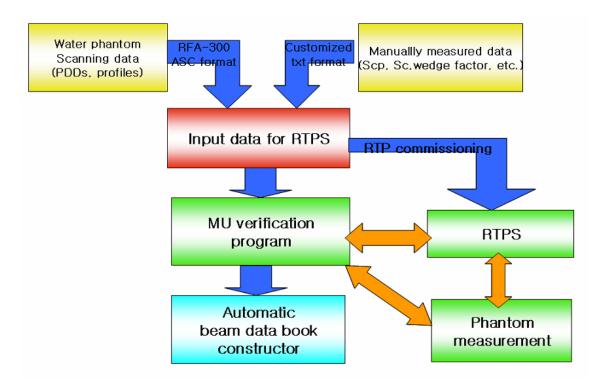


Figure 1. A schematic of development of the beam database and MU verification program

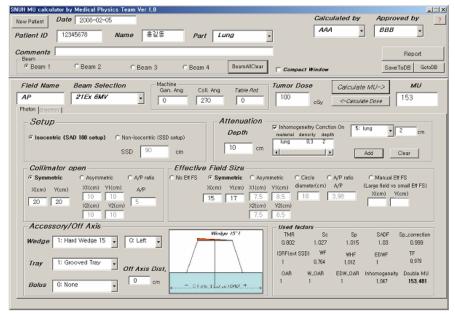


Figure 2. MU calculator for TPS verification is coded with Excel Visual Basic Application that can utilize graphic user interface (GUI).

# Machine # Energy # Source # Date		21Ex 6MV 6 Measured data in SNUH 2006-12-01			# Setup # Depth # Field Size # Accessory		SSD=100 cm Various Various No Acc										
									A/P	0.50	0.75	1.00	1.625	1.50	1.75	2.00	2.25
									F.S(cm) Depth(cm)	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
									0.5	72.3	73.3	76.6	77.2	77.7	78.2	79.5	80.7
1.0	95.8	96.1	96.8	97.0	97.1	97.1	97.4	97.6									
1.5	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0									
2.0	98.7	99.0	99.1	99.0	99.0	98.9	98.9	98.8									
2.5	95.7	96.6	96.8	96.9	96.8	96.7	96.7	96.7									
3.0	93.1	94.1	94.2	94.4	94.6	94.7	94.7	94.7									
3.5	90.4	91.3	91.7	92.0	92.2	92.4	92.5	92.6									
4.0	87.4	88.6	89.3	89.7	90.0	90.3	90.4	90.6									
4.5	84.9	86.0	86.7	87.2	87.6	88.0	88.2	88.3									
5.0	82.1	83.4	84.0	84.8	85.2	85.6	85.8	86.1									
5.5	79.3	80.8	81.6	82.2	82.8	83.3	83.6	83.9									
6.0	77.2	78.5	79.3	79.9	80.5	81.1	81.4	81.8									
6.5	74.4	76.0	76.9	77.6	78.3	79.0	79.4	79.7									
7 N	72.3	73 7	7 <u>4</u> 7	75 fs	76.3	77 ∩	77 A	77 7									

Figure 3. The dosimetry book is formatted in a spread sheet. All cells in the spread sheet are automatically updated according to raw beam data uploaded.

Table 1. Comparison of the calculated WF with the measured WF by using the PDD correction.

	10 cm measured	1.5 cm calculated	1.5 cm measured
Wedge15°	0.790	0.783	0.780
Wedge30°	0.645	0.635	0.630
Wedge45°	0.505	0.492	0.487
Wedge60°	0.427	0.413	0.410