

## DICOM Correction Proposal Form

Correction Number	CP-210
Log Summary: Clarification of fractionation scheme in RT Plan	
Type of Modification: Extension	Name of Standard PS 3.3-2000
Rationale for Correction:	
<p>In DICOM 2000 Part 3 Table C.8.45 (RT Fraction Scheme Module Attributes), the attribute "Number of Fractions Per Day" (300A,0079) is not clearly understood and should be renamed and corrected. One of the examples in this section is not consistent with the definitions, and should also be corrected.</p>	
Sections of document affected:	
<p>DICOM 2000 Part 3 (Information Object Definitions), Section C.8.8.13 (RT Fraction Scheme Module)          DICOM 2000 Part 6 (Data Dictionary)</p>	
Correction Wording:	
<p>In DICOM 2000 Part 3, Table C.8-45 (RT Fraction Scheme Module Attributes), modify the "Number of Fractions Per Day" (300A,0079) attribute name and description:</p>	
>Number of Fractions <b>Pattern Digits</b> Per Day	(300A,0079) 3 <del>Total number of treatments (Fractions) prescribed per day for current Fraction Group. Number of digits in Fraction Pattern (300A,007B) used to represent one day.</del> See Note 2.
<p>In DICOM 2000 Part 3, Table C.8-45 (RT Fraction Scheme Module Attributes), modify the "Fraction Pattern" (300A,007B) attribute description by replacing the underscores by multiplication signs, correcting the "Repeat Fraction Cycle Length" attribute name, and correcting the reference to the modified attribute name.</p>	
>Fraction Pattern	(300A,007B) 3 String of 0's (no treatment) and 1's (treatment) describing treatment pattern.-Length of string is 7 = x Number of Fractions <b>Pattern Digits</b> Per Day = x Repeat <b>Fraction</b> Cycle Length. Pattern shall start on a Monday.-See Note 2.
<p>In DICOM 2000 Part 3, Table C.8-45 (RT Fraction Scheme Module Attributes), modify Note 2:</p>	
<p>2. The fractionation pattern does not indicate the actual start of treatment, <b>or the order or timing of fraction delivery</b>. If treatment does not commence as outlined in the pattern, it is the application's responsibility to make any necessary adjustments.</p>	
<p>Examples of Fractionation Pattern Schemes:</p>	
<p>a) <i>1 fraction group, 1 fraction per day (Monday to Friday):</i></p> <p>Number of Fractions <b>Pattern Digits</b> per Day = 1, Repeat Fraction Cycle Length = 1,          Fraction Pattern = 1111100</p>	
<p>b) <i>2 fraction groups, 1 fraction per day, first fraction group Monday, Wednesday, and</i></p>	

*Friday, second fraction group Tuesday and Thursday:*

*Fraction Group 1:* Number of Fractions **Pattern Digits** Per Day = 1, Repeat Fraction Cycle Length = 1, Fraction Pattern = 1010100

*Fraction Group 2:* Number of Fractions **Pattern Digits** Per Day = 1, Repeat Fraction Cycle Length = 1, Fraction Pattern = 0101000

*c) 2 fraction groups, 1 fraction per day, alternating fraction groups every day of treatment (Monday to Friday):*

*Fraction Group 1:* Number of Fractions **Pattern Digits** Per Day = 1, Repeat Fraction Cycle Length = 2, Fraction Pattern = 10101000101000

*Fraction Group 2:* Number of Fractions **Pattern Digits** Per Day = 1, Repeat Fraction Cycle Length = 2, Fraction Pattern = 01010001010100

*d) 1 fraction group, 2 fractions per day (Monday to Friday):*

*Fraction Group 1:* Number of Fractions **Pattern Digits** Per Day = 2, Repeat Fraction Cycle Length = 1, Fraction Pattern = 11111111110000

*e) 2 fraction groups, one fraction once per day, the other fraction twice per day (Monday to Friday):*

*Fraction Group 1:* Number of Fractions **Pattern Digits** s Per Day = **1**, Repeat Fraction Cycle Length = **1**, Fraction Pattern = 1111100

*Fraction Group 2:* Number of Fractions **Pattern Digits** s Per Day = **2**, Repeat Fraction Cycle Length = **1**, Fraction Pattern = 11111111110000

In DICOM 2000 Part 6 (Data Dictionary), the following attribute name should be changed:

(300A,0079)                      Number of Fractions **Pattern Digits** Per Day    IS    1