DFDL Fixed Values

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# Explanation

Fixed values in DFDL provide valuable information for incorrect data. Fixed values constrain the logical value of an element when validating.

# Problem

Consider the following portion of an email header featuring a simple version number:

MIME-Version: 1.0

In this example, ‘MIME-Version’ *must* be equivalent, or fixed, to ‘1.0’. If the value is not ‘1.0’, it will fail to parse.

# Solution

1. The first requirement for the schema is fixed=”1.0” for the MIME\_version element.
2. The following infoset is the result of the parser

<header>

 <MIME\_version>1.0</MIME\_version>

</header>

1. If the email header contained the following instead of the information previously mentioned:

 MIME-Version: 1.1

 The parser would fail as the existing data value does not match the expected, fixed value.

# Schema

Here’s a complete schema using fixed values:

<?xml version="1.0" encoding="UTF-8"?>

<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:dfdl="http://www.ogf.org/dfdl/dfdl-1.0/">

 <xs:annotation>

 <xs:appinfo source="http://www.ogf.org/dfdl/">

 <dfdl:format separator="" initiator="" terminator="" leadingSkip='0' textTrimKind="padChar" textStringPadCharacter="%SP;" textStringJustification="left" lengthUnits="characters" initiatedContent="no"

 alignment="implicit" alignmentUnits="bits" trailingSkip="0" ignoreCase="no" separatorPolicy="suppressed"

 separatorPosition="infix" sequenceKind="ordered" occursCountKind="parsed" emptyValueDelimiterPolicy="both" representation="text" textNumberRep="standard" lengthKind="delimited" encoding="ASCII"/>

 </xs:appinfo>

 </xs:annotation>

 <xs:element name="header">

 <xs:complexType>

 <xs:sequence>

 <xs:element name="MIME\_version" **fixed="1.0"** type="xs:string" dfdl:initiator="MIME-Version:%WSP\*;" dfdl:terminator="%CR;%LF;"/>

 </xs:sequence>

 </xs:complexType>

 </xs:element>

</xs:schema>