

Personnel Record Example

[0030] The structure of an exemplary personnel record and its value for a particular individual is informally detailed in TABLE 1 below.

Name:	John P Smith
Title:	Director
Employee Number:	51
Date of Hire:	17 September 1971
Name of Spouse:	Mary T Smith
Number of Children:	2
Child Information	
Name:	Ralph T Smith
Date of Birth:	11 November 1957
Child Information	
Name:	Susan B Jones
Date of Birth:	17 July 1959

TABLE 1. Informal Description of Personnel Record

[0031] The structure of each such personnel record can be formally described as shown in TABLE 2 below using standard ASN.1 *type* notation for data types:

PersonnelRecord ::= [APPLICATION 0] IMPLICIT SET	
{ Name,	[0] VisibleString,
title	EmployeeNumber,
number	[1] Date,
dateOfHire	[2] Name,
nameOfSpouse	[3] IMPLICIT SEQUENCE OF
children	ChildInformation
	DEFAULT { } }
ChildInformation :: = SET	
{ Name,	[0] Date }
dateOfBirth	
Name ::= [APPLICATION 1] IMPLICIT SEQUENCE	
{ givenName	VisibleString,
initial	VisibleString,
familyName	VisibleString }
EmployeeNumber :: = [APPLICATION 2] IMPLICIT INTEGER	
Date :: = [APPLICATION 3] IMPLICIT VisibleString --YYYYMMDD	

TABLE 2. ASN.1 Type Notation of the Record Structure

[0032] This example illustrates an aspect of parsing ASN.1 syntax. The syntactic construct "DEFAULT" can only be applied to an element of a "SEQUENCE" or a "SET"; it cannot be applied to an element of a "SEQUENCE OF". Thus the null default, "DEFAULT { }" in "PersonnelRecord" applies only to the variable "children" and not to the variable "Child-