

## DEFECT REPORT FORM

1. Defect Report Number: 211  
Title: Year 2000 Correction
2. Source: USA
3. Addressed to: ISO/IEC JTC1/SC21/WG7 and ITU-T SG 7  
Editor Group on the Directory
4. (a) WG Secretariat: SAA  
(b) ITU-T WP: WP 4
5. Date Circulated by WG Secretariat:
6. Deadline for Response from Editor:
7. Defect Report Concerning:  
ITU-T Rec. X.501 (1993) | ISO/IEC 9594-2: 1993  
ITU-T Rec. X.501 (1997) | ISO/IEC 9594-2: 1997  
ITU-T Rec. X.511 (1993) | ISO/IEC 9594-3: 1993  
ITU-T Rec. X.511 (1997) | ISO/IEC 9594-3: 1997  
ITU-T Rec. X.518 (1993) | ISO/IEC 9594-4: 1993  
ITU-T Rec. X.518 (1997) | ISO/IEC 9594-4: 1997  
ITU-T Rec. X.520 (1993) | ISO/IEC 9594-6: 1993  
ITU-T Rec. X.520 (1997) | ISO/IEC 9594-6: 1997
8. Qualifier: error
9. References in Document:  
ITU-T Rec. X.501 (1993) | ISO/IEC 9594-2: 1993: 24.2, 24.4, 24.5  
ITU-T Rec. X.501 (1997) | ISO/IEC 9594-2: 1997: 26.2, 26.4, 26.5  
ITU-T Rec. X.511 (1993) | ISO/IEC 9594-3: 1993: 7.10, 8.1.1  
ITU-T Rec. X.511 (1997) | ISO/IEC 9594-3: 1997: 7.10, 8.1.1  
ITU-T Rec. X.518 (1993) | ISO/IEC 9594-4: 1993: 10.3  
ITU-T Rec. X.518 (1997) | ISO/IEC 9594-4: 1997: 10.3  
ITU-T Rec. X.520 (1993) | ISO/IEC 9594-6: 1993: 6.3.2  
ITU-T Rec. X.520 (1997) | ISO/IEC 9594-6: 1997: 6.3.2
10. Nature of Defect: This is a Year 2000-related defect. There are several instances of UTCTime in the directory specification. UTCTime has only two digits for the year, resulting in ambiguity with respect to century.
11. Solution Proposed by the Source: The proposed solution is to modify the specification to be consistent with the approach previously take for certificates (X.509 | ISO/IEC 9594-8). Specifically, replace each instance of **UTCTime** with **Time**, where Time is defined as:

```
Time ::= CHOICE {  
    utcTime      UTCTime,  
    generalizedTime  GeneralizedTime }  
}
```

In addition, add the following text to X.520 | IS 9594-6 clause 6.3.2:

"Before a value of **Time** is used in any comparison operation, e.g. as part of a matching rule in a search, and if the syntax of **Time** has been chosen as the **UTCTime** type, the value of the two digit year field shall be rationalized into a four digit year value as follows:

- If the 2-digit value is 00 through 49 inclusive, the value shall have 2000 added to it.
- If the 2-digit value is 50 through 99 inclusive, the value shall have 1900 added to it."

Finally, include the following note in each clause for which **Time** is specified:

"Note - The use of **GeneralizedTime** may prevent interworking with implementations unaware of the possibility of choosing either **UTCTime** or **GeneralizedTime**. It is the responsibility of those specifying the domains in which this Directory Specification will be used, e.g. profiling groups, as to when the **GeneralizedTime** may be used. In no case shall **UTCTime** be used for representing dates beyond 2049."

12. Editor's Response:

Accepted. However, the rationalization of **UTCTime** shall be specified in each affected part. The use of **GeneralizedTime** shall be mandated in version 2 or greater is negotiated.