Memo CP-D/685

Date: 14 February 2011

To: Distribution

From: N. Otsuka

Subject: **Free text in DATA section?**

Sometimes compilers forget to put heading and/or unit codes for a data field. M. Bossant (NEA Data Bank) prepared a list of subentries where extra characters undefined by the SUBENT record (N1) exist.

Example

```
SUBENT        T0246006   20040721                                  T024600600001
BIB               7          24                                    T024600600002
REACTION   (8-O-16(A,INL)8-O-16,PAR,DA,G,RSD)                      T024600600003
…
ENDBIB           24           0                                    T024600600027
COMMON            4           3                                    T024600600028
E          ANG-RSL     DATA-ERR    ERR-DIG                         T024600600029
MEV        ADEG        PER-CENT    NO-DIM                          T024600600030
  6.13     17.          45.           0.1                          T024600600031
ENDCOMMON         3           0                                    T024600600032
DATA              3          54                                    T024600600033
EN         ANG         DATA                                        T024600600034
MEV        ADEG        NO-DIM                                      T024600600035
 10.360     0.          1.74                                       T024600600036
 10.360    15.          2.06                                       T024600600037
…
 10.375    75.          0.99                                       T024600600047
 10.390     0.          2.02                                       T024600600048
 10.390    15.          2.12        0.21                           T024600600049
 10.390    30.          2.26        0.22                           T024600600050
…
```

Probably this compiler forgets a heading and unit code in the 4th data field in the DATA section. This is not recognized as an error by ZCHEX. Number of columns given in the DATA record (N1) is 3, and programs may skip the 4th column assuming that characters in the 4th field as free text.

It is not very obvious from the Formats Manual if free text is allowed in the DATA section. The following sentence in the EXFOR Formats Manual (Chapter 4) however indicates free text is now allowed:

> Records are not packed; rather, individual point information is kept on individual records; *i.e.*, if only four fields are associated with a data line, *the remaining two fields are left blank*, and, in the case of the data table, the information for the next line begins on the following record.

It may help some programs (e.g., ZORDER which has to determine N1 value.) if free text is explicitly forbidden in DATA (and also COMMON) section. Addition of the following rule into the EXFOR Formats Manual is proposed:

Free text
Free text may not be entered in the COMMON and DATA sections.

The list from M. Bossant was analysed and the result is summarized below. Note that D0032.004 has been already corrected in PRELIM.D074. Checking of free text in the COMMON and DATA sections has been already implemented JANIS TRANS Checker.

Subentry	Section	Detail
10410.004	DATA	N1=8, but values also in the 9th column
21532.003	DATA	N1=5, but values also in the 6th column
23045.005	DATA	N1=2, but values also in the 3rd column
23045.006	DATA	N1=2, but values also in the 3rd column
30991.005	DATA	N1=3, but a value also in the 4th column
A0837.005	DATA	N1=2, but a value also in the 3rd column
A1058.002	DATA	N1=2, should be 3.
A1387.004	COMMON	N1=1, should be 2
C1188.005	DATA	N1=4, but values also in the 5th column
D0032.004	COMMON	N1=1, but a value also in the 2nd column
D0086.007	DATA	N1=3, but values also in the 4th column
D0276.006	COMMON	N1=3, but a value also in the 4th column
D0452.012	DATA	N1=3, but values also in the 4th column
D0584.005	DATA	N1=2, but a value also in the 3rd column
D5038.001	DATA	N1=2, but values also in the 3 and 4th columns
D6083.005	DATA	N1=4, but values also in the 5th column
E0801.005	DATA	N1=2, but a value also in the 3rd column
E0801.007	DATA	N1=2, but values also in the 3rd column
E0801.009	DATA	N1=2, but values also in the 3rd column
E0801.010	DATA	N1=2, but values also in the 3rd column
E0801.011	DATA	N1=2, but values also in the 3rd column
E0801.012	DATA	N1=2, but values also in the 3rd column
E0801.013	DATA	N1=2, but values also in the 3rd column
E0801.014	DATA	N1=2, but values also in the 3rd column
E0801.015	DATA	N1=2, but values also in the 3rd column
E0801.016	DATA	N1=2, but values also in the 3rd column
E0801.017	DATA	N1=2, but values also in the 3rd column
E0801.018	DATA	N1=2, but values also in the 3rd column
E0801.019	DATA	N1=2, but values also in the 3rd column
E0801.020	DATA	N1=2, but values also in the 3rd column
E0801.021	DATA	N1=2, but values also in the 3rd column
E1089.028	DATA	N1=3, but values also in the 4th column
E1200.006	DATA	N1=2, but values also in the 3rd column
E1200.010	DATA	N1=2, but values also in the 3rd column
E1200.012	DATA	N1=2, but values also in the 3rd column
E1369.027	DATA	N1=2, but values also in the 3rd column
E1369.032	DATA	N1=2, but values also in the 3rd column
E1426.018	DATA	N1=2, but values also in the 3rd column
E1426.020	DATA	N1=2, but a value also in the 3rd column

E1482.009	DATA	N1=3, but values also in the 4th column
E1542.006	DATA	N1=3, but values also in the 4th column
E1686.023	DATA	N1=2, but values also in the 3rd column
E1686.024	DATA	N1=2, but values also in the 3rd column
E1713.007	DATA	N1=3, but values also in the 3rd column
E1713.021	DATA	N1=2, but values also in the 3rd column
E1713.025	DATA	N1=2, but a value also in the 3rd column
E1713.029	DATA	N1=2, but a value also in the 3rd column
E1756.043	DATA	N1=1, but a value also in the 2nd column
E1793.004	DATA	N1=3, but values also in the 4th column
E1889.006	DATA	N1=3, but a value also in the 4th column
E2095.003	DATA	N1=2, but values also in the 3rd column
E2109.004	DATA	N1=5, but values also in the 6th column
O1802.003	DATA	N1=4, but a decimal point in the 5th column
T0104.002	COMMON	N1=1, but a value also in the 2nd column
T0104.003	COMMON	N1=1, but a value also in the 2nd column
T0200.006	DATA	N1=5, but a value also in the 6th column
T0246.006	DATA	N1=4, but values also in the 4th column