

Ambiguous REFERENCE Keyword Coding Forms

(N. Soppera, 2018-04-18, Memo CP-N/144)

NRDC 2017 action A13 – Soppera – Check if there is a field or subfield which cannot be uniquely identified within the current coding rule described in the revised EXFOR Formats Manual “REFERENCE” (CP-D/920=WP2017-33).

In the current coding rule the coded information of REFERENCE keywords consists of 3 main fields: (reference type, reference, date), with the ‘reference’ part being composed of up to 4 subfields separated by comma.

For all reference types the first subfield is mandatory and all others are optional. When an optional subfield is not given its separating comma is omitted, except for the ‘volume’ subfield of reference types A/B/C and J/K.

We have reviewed all coding forms allowed by this rule and found that several forms are ambiguous and can be interpreted in two ways. See Appendix 1 for the list all allowed forms and their number of uses in the master EXFOR-2018-04-10.

Reference types A/B/C (Conference Abstracts / Books / Conferences):

General coding form:

(A or B or C, code, volume, (part), page (paper #), date)

Ambiguous coding forms:

(A or B or C, code, volume, (part), date)

(A or B or C, code, volume, (paper#), date)

and

(A or B or C, code, , (part), date)

(A or B or C, code, , (paper#), date)

As an illustration the 5 occurrences of the first ambiguous form in EXFOR-2018-04-10 are:

(B, NEUT.CS 1B, 1, (B), 1988)

(B, PH-DAT, 13, (5), 1990)

(B, PH-DAT, 13, (6), 1991)

(C, 68MADRAS, 1, (283), 196802)

(C, 88BOMBAY, 31B, (O22), 1988)

See Appendix 2 for a listing of all ambiguous forms and their occurrences.

Reference types J/K (Journals / Journal Abstracts):

General coding form:

(J or K, code, volume, (issue#), page (paper#), date)

Ambiguous coding forms:

(J or K, code, volume, (issue#), date)

(J or K, code, volume, (paper#), date)

and

(J or K, code, , (issue#), date)

(J or K, code, , (paper#), date)

Reference types P/R/S/X (Progress Reports / Reports / Conference Reports / Preprint):

General coding form:

(P or R or S or X, code-number, (volume/part), page (paper#), date)

Ambiguous coding forms:

(P or R or S or X, code-number, (volume/part), date)

(P or R or S or X, code-number, (paper#), date)

Appendix 1: Allowed coding forms

All allowed coding forms are listed in the tables below, along with some coding forms that do not follow the rule.

'Nb uses' column contains counts of unique reference codes in REFERENCE and MONIT-REF keywords seen in EXFOR-2018-04-10.

The shaded rows are the coding forms that are ambiguous.

Reference types A/B/C (Conference Abstracts / Books / Conferences)

| Subfields | | | | Reference coding | Nb uses |
|-------------------------------------|------|------|--------|--|---------|
| Volume | Part | Page | Paper# | | |
| x | x | x | x | (A/B/C,code,volume,(part),page(paper#),date) | |
| x | x | x | - | (A/B/C,code,volume,(part),page,date) | 16 |
| x | x | - | x | (A/B/C,code,volume,(part),(paper#),date) | |
| x | x | - | - | (A/B/C,code,volume,(part),date) | 5 |
| x | - | x | x | (A/B/C,code,volume,page(paper#),date) | 88 |
| x | - | x | - | (A/B/C,code,volume,page,date) | 1433 |
| x | - | - | x | (A/B/C,code,volume,(paper#),date) | (*) |
| x | - | - | - | (A/B/C,code,volume,date) | 330 |
| - | x | x | x | (A/B/C,code,,(part),page(paper#),date) | |
| - | x | x | - | (A/B/C,code,,(part),page,date) | 1 |
| - | x | - | x | (A/B/C,code,,(part),(paper#),date) | |
| - | x | - | - | (A/B/C,code,,(part),date) | 112 |
| - | - | x | x | (A/B/C,code,,page(paper#),date) | 25 |
| - | - | x | - | (A/B/C,code,,page,date) | 1236 |
| - | - | - | x | (A/B/C,code,,(paper#),date) | (*) |
| - | - | - | - | (A/B/C,code,,date) | 85 |
| Coding forms in use but not allowed | | | | | |
| | | | | (A/B/C,code,(xxx),date) | 8 |
| | | | | (A/B/C,code,(xxx),xxx,date) | 1 |
| | | | | (A/B/C,code,,date) | 1 |
| | | | | (A/B/C,code,xxx,,date) | 3 |

(*) counted only once

Reference types J/K (Journals / Journal Abstracts)

| Subfields | | | | Reference coding | Nb uses |
|-------------------------------------|--------|------|--------|--|---------|
| Volume | Issue# | Page | Paper# | | |
| x | x | x | x | (J/K,code,volume,(issue#),page(paper#),date) | 5 |
| x | x | x | - | (J/K,code,volume,(issue#),page,date) | 4753 |
| x | x | - | x | (J/K,code,volume,(issue#),(paper#),date) | 1 |
| x | x | - | - | (J/K,code,volume,(issue#),date) | 1 |
| x | - | x | x | (J/K,code,volume,page(paper#),date) | 321 |
| x | - | x | - | (J/K,code,volume,page,date) | 22413 |
| x | - | - | x | (J/K,code,volume,(paper#),date) | (*) |
| x | - | - | - | (J/K,code,volume,date) | |
| - | x | x | x | (J/K,code,,(issue#),page(paper#),date) | |
| - | x | x | - | (J/K,code,,(issue#),page,date) | 158 |
| - | x | - | x | (J/K,code,,(issue#),(paper#),date) | |
| - | x | - | - | (J/K,code,,(issue#),date) | 2 |
| - | - | x | x | (J/K,code,,page(paper#),date) | |
| - | - | x | - | (J/K,code,,page,date) | 2 |
| - | - | - | x | (J/K,code,,(paper#),date) | (*) |
| - | - | - | - | (J/K,code,,date) | 1 |
| Coding forms in use but not allowed | | | | | |
| | | | | (J/K,code,xxx,xxx,xxx,date) | 43 |

Reference types P/R/S/X (Progress Reports / Reports / Conference Reports / Preprint)

| Subfields | | | Reference coding | Nb uses |
|-------------------------------------|------|--------|---|---------|
| Vol./Part | Page | Paper# | | |
| x | x | x | (P/R/S/X,code-number,(volume/part),page(paper#),date) | |
| x | x | - | (P/R/S/X,code-number,(volume/part),page,date) | 197 |
| x | - | x | (P/R/S/X,code-number,(volume/part),(paper#),date) | 22 |
| x | - | - | (P/R/S/X,code-number,(volume/part),date) | 47 |
| - | x | x | (P/R/S/X,code-number,page(paper#),date) | 8 |
| - | x | - | (P/R/S/X,code-number,page,date) | 3250 |
| - | - | x | (P/R/S/X,code-number,(paper#),date) | (*) |
| - | - | - | (P/R/S/X,code-number,date) | 2508 |
| Coding forms in use but not allowed | | | | |
| | | | (P/R/S/X,code-number,,date) | 176 |
| | | | (P/R/S/X,code-number,xxx,,date) | 3 |
| | | | (P/R/S/X,code-number,xxx,xxx,date) | 10 |

Appendix 2: Ambiguous coding forms in EXFOR-2018-04-10

Reference types A/B/C (Conference Abstracts / Books / Conferences):

Ambiguous forms #1

Can be interpreted as either:

(A or B or C, code, volume, (part), date)
(A or B or C, code, volume, (paper#), date)

Occurrences:

(B, NEUT.CS 1B, 1, (B), 1988)
(B, PH-DAT, 13, (5), 1990)
(B, PH-DAT, 13, (6), 1991)
(C, 68MADRAS, 1, (283), 196802)
(C, 88BOMBAY, 31B, (O22), 1988)

Ambiguous forms #2

Coding forms that can be interpreted as either:

(A or B or C, code, , (part), date)
(A or B or C, code, , (paper#), date)

Occurrences:

(B, LANDOLT, , (I/16B), 1998)
(B, TRANSU.EL. , , (19.4), 47)
(B, TRANSU.EL. , , (19.5), 47)
(C, 2002SEOUL, , (5C04), 2002)
(C, 2004ARGON, , (393), 2004)
(C, 2005NOTRED, , (363), 2004)
(C, 2006CERN, , (049), 2006)
(C, 2006CERN, , (055), 2006)
(C, 2006CERN, , (085), 2006)
(C, 2006CERN, , (089), 200606)
(C, 2006CERN, , (108), 2006)
(C, 2006CERN, , (138), 2006)
(C, 2006CERN, , (161), 2006)
(C, 2006CERN, , (192), 200606)
(C, 2006CERN, , (204), 2006)
(C, 2006CERN, , (217), 2006)
(C, 2006CERN, , (223), 200606)
(C, 2006CERN, , (239), 200606)
(C, 2006CERN, , (273), 2006)
(C, 2006CERN, , (274), 2006)
(C, 2006CERN, , (54), 200606)
(C, 2006CERN, , (55), 200606)
(C, 2006MANGAL, , (IT17), 2006)
(C, 2006MANGAL, , (TP15), 2006)

(C,2006VANCOU,, (B042),200606)
(C,2006VANCOU,, (B043),200606)
(C,2006VANCOU,, (B072),200609)
(C,2006VANCOU,, (B075),2006)
(C,2006VANCOU,, (B076),2006)
(C,2006VANCOU,, (B104),2006)
(C,2006VANCOU,, (C013),2006)
(C,2006VANCOU,, (C031),2006)
(C,2006VANCOU,, (C032),2006)
(C,2006VANCOU,, (C034),2006)
(C,2006VANCOU,, (C035),2006)
(C,2006VANCOU,, (C2126),2006)
(C,2008AOMORI,, (#P16P1304),200810)
(C,2008AOMORI,, (P16P1279),2008)
(C,2008AOMORI,, (P16P1280),2008)
(C,2008INTLAK,, (FP275),2008)
(C,2008MACKIN,, (#080),2008)
(C,2008MACKIN,, (011),2008)
(C,2008MACKIN,, (0159),2008)
(C,2008MACKIN,, (016),2008)
(C,2008MACKIN,, (033),2008)
(C,2008MACKIN,, (037),2008)
(C,2008MACKIN,, (046),2008)
(C,2008MACKIN,, (058),2008)
(C,2008MACKIN,, (067),2008)
(C,2008MACKIN,, (084),2008)
(C,2008MACKIN,, (086),2008)
(C,2008MACKIN,, (096),2008)
(C,2008MACKIN,, (097),2008)
(C,2008MACKIN,, (105),2008)
(C,2008MACKIN,, (134),2008)
(C,2008MACKIN,, (135),2008)
(C,2008MACKIN,, (136),2008)
(C,2008MACKIN,, (151),2008)
(C,2008MACKIN,, (168),2008)
(C,2008MACKIN,, (224),2008)
(C,2008MACKIN,, (241),2008)
(C,2008MACKIN,, (98),2008)
(C,2010HEIDLB,, (129),2010)
(C,2010HEIDLB,, (194),2010)
(C,2010HEIDLB,, (199),2010)
(C,2010HEIDLB,, (214),2010)
(C,2010HEIDLB,, (244),2010)
(C,2010HEIDLB,, (51),2010)
(C,2011GHENT,, (C1.14),2011)
(C,2011GHENT,, (C1.41),2011)
(C,2011GHENT,, (CINV21),2011)
(C,2012CAIRNS,, (005),2012)

(C,2012KNOX,, (186),2012)
(C,2014DEBREC,, (102),2014)
(C,55ANS,, (203),1955)
(C,55ANS,, (203),5512)
(C,61DUBNA,, (R-956),1961)
(C,64GENEVA,, (651),196409)
(C,65ANTWERP,, (101),6503)
(C,65ANTWERP,, (102),1965)
(C,65ANTWERP,, (107),6507)
(C,65ANTWERP,, (13),1965)
(C,65ANTWERP,, (183),6507)
(C,65ANTWERP,, (36),6507)
(C,65ANTWERP,, (65),6507)
(C,65ANTWERP,, (74),6507)
(C,65ANTWERP,, (77),6507)
(C,65ANTWERP,, (95),6507)
(C,65ANTWERP,, (96),6507)
(C,66PARIS,, (CM-23/107),196610)
(C,67TOKYO,, (8.87),196709)
(C,68DUBNA,, (ACC-68/16),1968)
(C,68DUBNA,, (UK-10),1968)
(C,68WASH,, (94),6810)
(C,72BUD,, (A65),197208)
(C,72BUD,, (D-21),197208)
(C,73PETTEN,, (73E1),7305)
(C,75DEBREC,, (27PM5),197508)
(C,79JUELICH,, (B15),1979)
(C,79JUELICH,, (C22),197905)
(C,79KNOX,, (AB2),197910)
(C,79KNOX,, (CC1),197910)
(C,79KNOX,, (DC-9),197910)
(C,79KNOX,, (GC-7),7910)
(C,81NEUHERBG,, (III-1),198106)
(C,82ANTWER,, (47B),198209)
(C,91JUELIC,, (O31),9105)
(C,92TURKU,, (A11),1992)
(C,92TURKU,, (A23),1992)
(C,99PRAHA,, (C20),1999)
(C,99PRAHA,, (PC-24),1999)
(C,99PRAHA,, (PC25),1999)

Reference types J/K (Journals / Journal Abstracts)

Ambiguous forms #1

Can be interpreted as either:

(J or K, code, volume, (issue#), date)

(J or K, code, volume, (paper#), date)

Occurrences:

(J, REA, 7, (4), 1969)

Ambiguous forms #2

Can be interpreted as either:

(J or K, code, , (issue#), date)

(J or K, code, , (paper#), date)

Occurrences:

(J, ACS, , (21), 7404)

(J, ACS, , (23), 7002)

Reference types P/R/S/X (Progress Reports / Reports / Conference Reports / Preprint):

Ambiguous forms

Can be interpreted as either:

(P or R or S or X, code-number, (volume/part), date)

(P or R or S or X, code-number, (paper#), date)

Occurrences:

(P, BLG-537, (5-10), 1979)

(P, HW-77609, (3.1), 63)

(R, AECU-2040, (2), 195306)

(R, ANL-5800, (2.ED.), 195802)

(R, BNL-325, (1), 1964)

(R, BNL-325, (1), 1973)

(R, BNL-325, (1), 1981)

(R, BNL-325, (2), 1966)

(R, BNL-325, (2A), 1966)

(R, BNL-325, (2A), 1969)

(R, BNL-325, (2B), 1966)

(R, BNL-325, (2C), 1966)

(R, BNL-325, (3), 1965)

(R, BNL-325, (S1), 1960)

(R, BNL-325, (S2), 1965)

(R, BNL-325, (SUPPL.1), 1966)

(R, BNL-325, (VOL.1), 1973)
(R, BNL-50242, (T-577), 197006)
(R, CEA-N-1466, (1), 1971)
(R, CEA-N-1466, (3), 1975)
(R, CEA-N-1466, (5), 1981)
(R, EANDC (E)-111, (SUPP.1), 196810)
(R, EANDC (E)-111, (SUPP.2), 196902)
(R, EANDC-50-S, (95), 6507)
(R, EPRI-NP-3436, (1), 1984)
(R, EPRI-NP-3436, (2), 1984)
(R, EPRI-NP-3436, (3), 1984)
(R, EPRI-NP-3436, (4), 1984)
(R, EUR-3963, (SUPP.1), 196810)
(R, EUR-3963, (SUPP.2), 196902)
(R, FIAN-24, (3), 1964)
(R, GEAP-13838, (H-16), 7206)
(R, ICP-1050, (III), 197709)
(R, IFA-NR-33, (1970), 197007)
(R, IFA-R-10, (1974), 1974)
(R, INDC (NDS)-272, (131), 199203)
(R, INDC-36, (A-22), 1981)
(R, JAERI-D-98-006, (2), 1998)
(R, KFK-1000, (SUPP.1), 196810)
(R, KFK-1000, (SUPP.2), 196902)
(R, OKTAV-A-92-01, (Li-6), 1992)
(R, OKTAV-A-92-01, (Li-7), 1992)
(S, IAEA-SM-241, (F29), 7905)
(S, IAEA-SM-241, (F30), 7905)
(S, INDC-156, (CN-23/59), 1967)
(S, INDC-156, (CN-23/69), 1967)
(S, JAEA-C-2008, (B25), 2008)