Projects in CINDA: Proposal #2

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The content of CINDA library was frozen for a few years due to several reasons: changes in the data format, new computer platforms, new software, new staff in the nuclear data centres and others. Some of these reasons are conceptual. An important point is to have a transparent and understandable way of input, checking and presenting information. From this view point, new CINDA format (which looks really like old archaic format) has obvious problems. Although, CINDA Editor was developed in order to resolve this problem (program was distributed NRDC-2005), compilation to CINDA still looks like complex process with unclear elements for the beginners.

Concept of Projects was presented on the last NRDC meeting (2005). The main idea was to use another way of presentation of information in CINDA. Traditional blocking of References united by unique combination of <Target-Reaction-Quantity-Lab-BlockNo> was proposed to replace by <Lab-ProjectNo> with nested {References {Reactions}}. Both systems are equivalent in principal, and could have the same output presentations. The advantages of the new presentation are: easy observation of information and simplification of the blocking and editing at the end.

One of possible advantages was seen as usage of XML format and standard XML-editors. Projects in XML-format were offered as one of output options on NDS CD-ROM "EXFOR-CINDA" retrieval system. But practice has shown, that the XML-format is complex for a "manual" work, and needs an additional development of XML components (like, schema) and software.

The idea of the new proposal is to use an internal presentation of information for compilation and exchange based on Projects but not in XML format. Project is again identified by the Lab and Number and contains References (see Fig.1). Every Reference could have some common information (e.g. Author and Title) and list of Reactions with some information (energy, type of work, etc.). Minimal item for exchange between data centres is Reference. Information inside Reference can be placed at the beginning and redefined in a line if needed. Reference can have also a Command, like Delete or Modify-reference-code (see Fig.2).

The proposed format is trivial for observation, eye checking, simple for manual editing and can be (easily) adopted for existing relational databases. If the concept will be accepted by NRDC, all further details can be specified by a working group and be presented on the next NRDC meeting.

```
#CINDA-Project
#Project=(1USAHRV,66)

#Ref=(J,PR:,99,740:195508)
#Author=(Culler+)
#R=(1-H-1(N,TOT),CS)    #W=(19900117,C) #L=(E,3,9.3+07,1.1+08)  #C=Culler+  GOOD GEOM
#R=(1-H-2(N,TOT),CS)    #W=(19900117,C) #L=(E,3,9.3+07,1.1+08)  #C=Culler+ GOOD GEOMETRY
#R=(6-C-12(N,TOT),CS)   #W=(19900117,C) #L=(E,3,6.1+07,1.1+08)  #C=Culler+
#R=(8-O-16(N,TOT),CS)   #W=(19900117,+) #L=(E,3,9.3+07,1.1+08)  #C=Culler+
#R=(13-AL-27(N,TOT),CS) #W=(19900117,C) #L=(E,3,9.3+07,1.1+08)  #C=Culler+
#R=(14-SI-0(N,TOT),CS)  #W=(19900117,C) #L=(E,3,9.3+07,1.1+08)  #C=Culler.
#R=(17-CL-0(N,TOT),CS)  #W=(19900117,C) #L=(E,3,7.7+07,1.1+08)  #C=Culler+ GOOD GEOM ATTEN, SCIN TELE
#R=(22-TI-0(N,TOT),CS)  #W=(19900117,C) #L=(E,3,6.1+07,1.1+08)  #C=Culler+ GOOD GEOM. GRPH. TBLS.
#R=(26-FE-0(N,TOT),CS)  #W=(19900117,C) #L=(E,3,9.3+07,1.1+08)  #C=Culler.
#R=(48-CD-0(N,TOT),CS)  #W=(19900117,C) #L=(E,3,6.1+07,1.1+08)  #C=Culler.
#R=(80-HG-0(N,TOT),CS)  #W=(19900117,C) #L=(E,3,6.1+07,1.1+08)  #C=Culler.
#R=(82-PB-0(N,TOT),CS)  #W=(19900117,C) #L=(E,3,6.1+07,1.1+08)  #C=Culler+TRNS.GRPH.TBL.CFD
#/Ref

#Ref=(J,PR:,99,740:195505)
#Author=(Culler+)
#R=(29-CU-0(N,TOT),CS)   #W=(19900117,C) #L=(E,3,6.1+07,1.1+08)  #C=Culler+
#/Ref

#Ref=(J,PR:,95,585:195407)
#Author=(Culler+)
#R=(1-H-1(N,TOT),CS)    #W=(19930504,+) #L=(E,3,9.5+07,1.1+08)  #C=Culler+ TBL.
#R=(1-H-2(N,TOT),CS)    #W=(19930504,+) #L=(E,3,9.5+07,1.1+08)  #C=Culler+ TBL.
#R=(6-C-12(N,TOT),CS)   #W=(19930504,+) #L=(E,3,6.2+07,1.1+08)  #C=Culler+ TBL.
#R=(8-O-16(N,TOT),CS)   #W=(19930504,+) #L=(E,3,9.5+07,1.1+08)  #C=Culler+ TBL.
#R=(13-AL-27(N,TOT),CS) #W=(19930504,+) #L=(E,3,9.5+07,1.1+08)  #C=Culler+ TBL.
#R=(14-SI-0(N,TOT),CS)  #W=(19930504,+) #L=(E,3,9.5+07,1.1+08)  #C=Culler+ TBL.
#R=(26-FE-0(N,TOT),CS)  #W=(19930504,+) #L=(E,3,9.5+07,1.1+08)  #C=Culler+ TBL.
#R=(82-PB-0(N,TOT),CS)  #W=(19930504,+) #L=(E,3,6.2+07,1.1+08)  #C=Culler+ TBL.
#/Ref

#Ref=(4,EXFOR:11088)
#Author=(V.Culler,R.W.Waniek)
#Title=TOTAL CROSS SECTIONS FOR HIGH ENERGY NEUTRONS.
#R=(1-H-1(N,TOT),CS)    #W=(19900117,+) #L=(E,6,9.3+07,1.1+08)  #C=.4 PTS. SIGMA.
#R=(1-H-2(N,TOT),CS)    #W=(19900117,C) #L=(E,6,9.3+07,1.1+08)  #C=. 4 PTS, SIG
#R=(6-C-12(N,TOT),CS)   #W=(19900117,C) #L=(E,6,6.1+07,1.1+08)  #C=. 12 PTS, SIG
#R=(8-O-16(N,TOT),CS)   #W=(19900117,+) #L=(E,6,9.3+07,1.1+08)  #C=.4 DATA PTS. SIG AT 4 ES
#R=(13-AL-27(N,TOT),CS) #W=(19900117,C) #L=(E,6,9.3+07,1.1+08)  #C=. 4 PTS, SIG
#R=(14-SI-0(N,TOT),CS)  #W=(19900117,C) #L=(E,6,9.3+07,1.1+08)  #C=.4 PTS. SIGMA.
#R=(17-CL-0(N,TOT),CS)  #W=(19900117,C) #L=(E,6,7.7+07,1.1+08)  #C=. 8 PTS, SIG
#R=(22-TI-0(N,TOT),CS)  #W=(19900117,C) #L=(E,6,6.1+07,1.1+08)  #C=. 12PTS. CS DATA.
#R=(26-FE-0(N,TOT),CS)  #W=(19900117,C) #L=(E,6,9.3+07,1.1+08)  #C=.4 PTS. SIGMA.
#R=(29-CU-0(N,TOT),CS)  #W=(19900117,C) #L=(E,6,6.1+07,1.1+08)  #C=. 12 PTS. SIG
#R=(80-HG-0(N,TOT),CS)  #W=(19900117,C) #L=(E,6,6.1+07,1.1+08)  #C=.12 PTS. SIGMA.
#R=(82-PB-0(N,TOT),CS)  #W=(19900117,C) #L=(E,6,6.1+07,1.1+08)  #C=.12 PTS. SIGMA.
#/Ref

#PrjStat: nRef=4 nLines=33
#/Project
#/CINDA-Project
```

Fig.1

```
#CINDA-Project
#Project=(1USAHRV,66)

#Ref=(J,PR:,99,740:195508) #A=del
#/Ref

#Ref=(J,PR:,99,1740:195508)
#W=(19900117,C)
#Author=(Culler+)
#L=(E,3,9.3+07,1.1+08)
#C=Culler+  GOOD GEOM
#R=(1-H-1(N,TOT),CS)
#R=(1-H-2(N,TOT),CS)
#R=(6-C-12(N,TOT),CS)   #E0=(6.1+07) #C=Culler+
#R=(8-O-16(N,TOT),CS)   #W=(19900117,+) #C=Culler+
#R=(13-AL-27(N,TOT),CS) #C=Culler+
#R=(14-SI-0(N,TOT),CS)  #C=Culler.
#R=(17-CL-0(N,TOT),CS)  #E0=(7.7+07) #C=Culler+ GOOD GEOM ATTEN, SCIN TELE
#R=(22-TI-0(N,TOT),CS)  #E0=(6.1+07) #C=Culler+ GOOD GEOM. GRPH. TBLS.
#R=(26-FE-0(N,TOT),CS)  #C=Culler.
#R=(48-CD-0(N,TOT),CS)  #E0=(6.1+07) #C=Culler.
#R=(80-HG-0(N,TOT),CS)  #E0=(6.1+07) #C=Culler.
#R=(82-PB-0(N,TOT),CS)  #E0=(6.1+07) #C=Culler+TRNS.GRPH.TBL.CFD
#/Ref

#Ref=(J,PR:,99,740:195505)
#W=(19900117,C)
#Author=(Culler+)
#L=(E,3,6.1+07,1.1+08)
#C=Culler+
#R=(29-CU-0(N,TOT),CS)
#/Ref
```

Equivalent to:

```
#Ref=(J,PR:,99,740:195505)
#Author=(Culler+)
#R=(29-CU-0(N,TOT),CS) #W=(19900117,C) #L=(E,3,6.1+07,1.1+08) #C=Culler+
#/Ref
```

```
#Ref=(J,PR:,95,585:195407)
#W=(19930504,+)
#Author=(Culler+)
#L=(E,3,9.5+07,1.1+08)
#C=Culler+ TBL.
#R=(1-H-1(N,TOT),CS)
#R=(1-H-2(N,TOT),CS)
#R=(6-C-12(N,TOT),CS)    #E0=(6.2+07)
#R=(8-O-16(N,TOT),CS)
#R=(13-AL-27(N,TOT),CS)
#R=(14-SI-0(N,TOT),CS)
#R=(26-FE-0(N,TOT),CS)
#R=(82-PB-0(N,TOT),CS)   #E0=(6.2+07)
#/Ref

#Ref=(4,EXFOR:11088)
#Author=(V.Culler,R.W.Waniek)
#Title=TOTAL CROSS SECTIONS FOR HIGH ENERGY NEUTRONS.
#W=(19900117,C)
#L=(E,6,9.3+07,1.1+08)
#C=.4 PTS. SIGMA.
#R=(1-H-1(N,TOT),CS)     #W=(19900117,+)
#R=(1-H-2(N,TOT),CS)
#R=(6-C-12(N,TOT),CS)    #E0=(6.1+07)  #C=. 12 PTS, SIG
#R=(8-O-16(N,TOT),CS)    #W=(19900117,+)  #C=.4 DATA PTS. SIG AT 4 ES
#R=(13-AL-27(N,TOT),CS)
#R=(14-SI-0(N,TOT),CS)
#R=(17-CL-0(N,TOT),CS)   #E0=(7.7+07)  #C=. 8 PTS, SIG
#R=(22-TI-0(N,TOT),CS)   #E0=(6.1+07)  #C=. 12PTS. CS DATA.
#R=(26-FE-0(N,TOT),CS)
#R=(29-CU-0(N,TOT),CS)   #E0=(6.1+07)  #C=. 12 PTS. SIG
#R=(80-HG-0(N,TOT),CS)   #E0=(6.1+07)  #C=.12 PTS. SIGMA.
#R=(82-PB-0(N,TOT),CS)   #E0=(6.1+07)  #C=.12 PTS. SIGMA.
#/Ref

#PrjStat: nRef=4 nLines=33
#/Project
#/CINDA-Project
```

Fig.2