

# X5json discussion - future of x5json

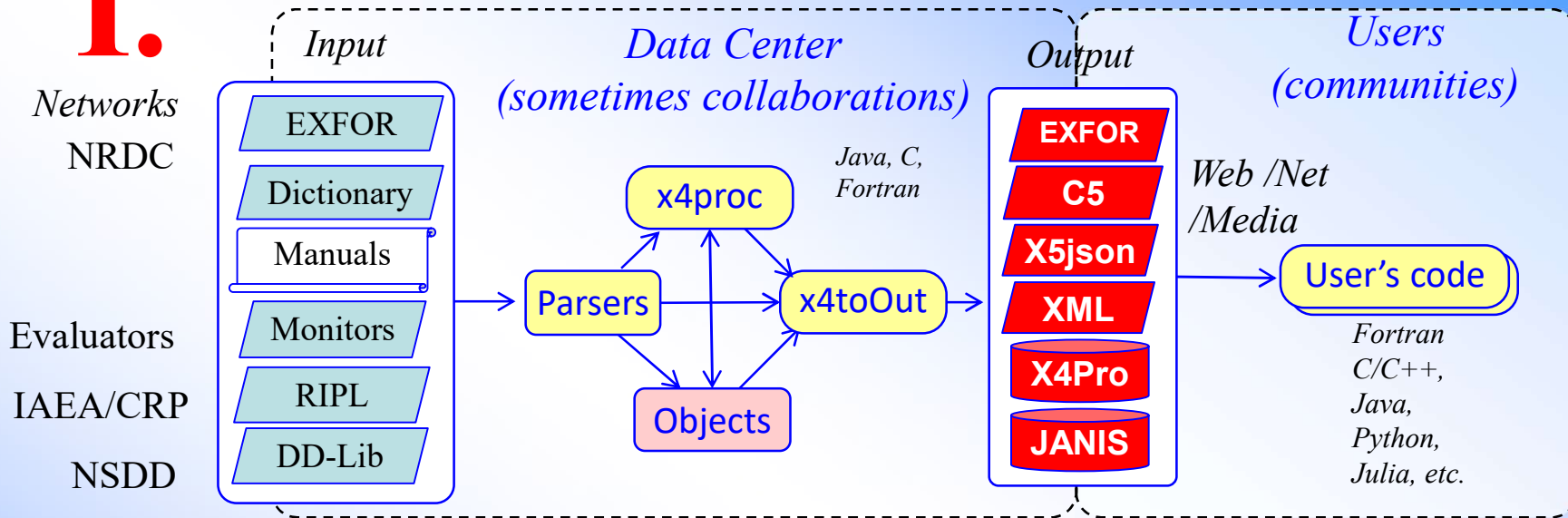
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~ independent software developer ~

EXFOR Workshop: Compilation of Experimental Nuclear Reaction Data  
3 - 6 December 2024, IAEA Headquarters, Vienna, Austria

# Concepts of data dissemination

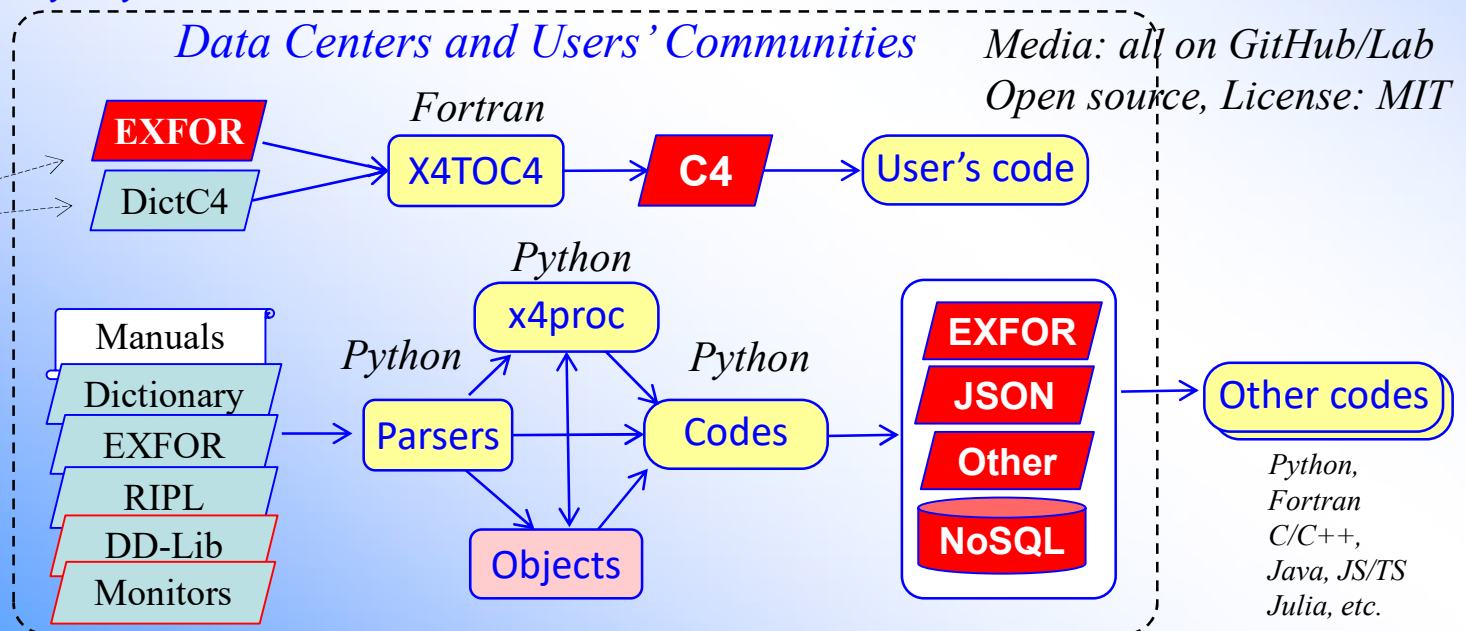
## I.



*Functioning. Stable. Java*

*Not yet ready. Python.*

## II.



# Overview: EXFOR codes and systems

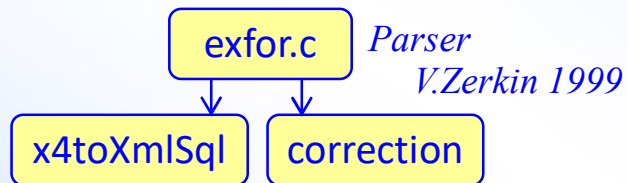
Fortran

*Built-in parsers*

1986 X4TOC4 ZCHEX 1998

*D.Cullen, A.Trkov, V.McLane, V.Zerkin*

C



Java

JANIS *N.Soperra et.al. 2004*

x4parsers/classes, x4toc5  
/x4+/x5/xml/csv/web/db,... *V.Zerkin 2005-2024*

Python

x4i *GPLv2 D.Brown 2011*

x4i3 *GPLv2 A.Fedynitch 2020*

exfor-parserpy *G.Schnabel 2019*

exforparser,  
exfor\_dict.,  
exfor\_json,... *S.Okumura 2022(?)*

ForEX:  
X4TOJ4,  
J4TOX4,  
DICA2J,... *N.Otsuka 2024*

x4d, x4py,... *V.Zerkin 2024*

*Fortran, C, Java codes:*

1. *Functioning many years (10~30)*
2. *Proven quality*
3. *Powerful (a lot of functionality)*
4. *Produce useful results already now*
5. *Needs intermediate step to deliver data to other languages (C5/XML/CSV/JSON/X4Pro/Web-API)*
6. *Large, need professional maintenance*

**READY (Now)**

*Python codes:*

1. *Can be used as is in Python codes (good for young generation using Python)*
2. *Easier to read and understand*
3. *Unknown quality (debug)*
4. *Needs JSON/XML/text to feed other languages*
5. *Require deep study of EXFOR, time and efforts to implement full functionality existing in Java*

**NOT READY (When?)**

**Thank you.**