

# Top-level hierarchy specifications

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# Outline of today's discussion

- Summarize status of specifications document
  - Finished parts
  - Unwritten parts
- What input do we need to complete it?
- What is timeline?
- Should specifications be included in final report?
- Status of GND support in new codes

- **Generalized Nuclear Data (GND) format is a LLNL in-house format**
  - Version in use at previous WPEC: GND-1.5
  - Current: GND-1.7
  - In development: GND-1.8
- **WPEC/SG-38 is developing a “new format” to replace the ENDF-6 format**
  - Requirements of format finalized, writeups being finalized
  - Specifications very much in development as are specific implementations
  - Specific implementations for XML look an awful lot like GND (and GND keeps getting modified as consensus emerges on what we want from the “new format”). Some would say that they are identical.
- **So, is the “new format” GND?**
  - Reticence from some outside LLNL to use a format named by LLNL
  - ENDF/B is always released in the ENDF format
- **ENDF/B-VIII will be released in the “new format”**

- **Generalized Nuclear Data (GND) format is a LLNL in-house format**

- Version in use at previous WPEC: GND-1.5
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**I know we don't have a name for the format, but we do have a prototype. If we agree (or can get agreement with modifications) with what is in GND, we should write it up.**

- So,
  - Reticence from some outside LLNL to use a format named by LLNL
  - ENDF/B is always released in the ENDF format
- **ENDF/B-VIII will be released in the “new format”**

*Competition just started in SG38  
for a name that should give the right heavy weight  
to a format for data well evaluated  
where many scientists will have collaborated  
for which they expect to be congratulated  
once real progress has been accelerated  
and when nobody finally is exasperated.  
Proposed were all kinds of well sounding names  
a competition timed for winter olympic games,  
nice sand, ufo ions have already their claims.  
Comprehension, tradition and avoiding confusion  
as well as registration and copyright exclusion  
they all are shouting aloud to heaven:  
It should be "endf-7" — Enrico Sartori*

# What is status of processing codes with respect to GND?

- **FUDGE (LLNL)**

- First code to use GND
- Open source, under BSD license
- See <https://ndclx4.bnl.gov/gf/project/gnd/>

- **NJOY-21 (LANL)**

- Long term, open source, replacement for NJOY2012
- In active development, adding GND functionality
- See <https://njoy.github.io/>

- **AMPX (ORNL)**

- Being modernized as part of overall SCALE modernization effort
- In active development, adding GND functionality

- **TREND (CEA)**

- GND support planned

- **GAIA (IRSN)**

- GND support planned

- **GRUCON (Kuchatov Inst.)**

- GND support planned

# Status: basically an outline

1. **Intro** — unwritten
2. **Conventions** — started, may need expanding on
3. **Top level**
  1. **reactionSuite** — top level + 1 level down elements **DONE**
  2. **metaEvaluation** — empty
  3. **covarianceSuite** — empty
4. **List of representations** — started
5. **Documentation** — needs expanding, but core is done
6. **Dictionary of particle** — not started
7. **Resonances** — started
8. **Cross sections** — started, needs fleshing out
9. **Products and product lists** — started, please check
10. **Reaction-related descriptions** — empty
11. **Covariances** — needs serious work
12. **Special cases**
  1. **simple cases** — empty
  2. **FPY** — empty
  3. **TSL** — empty
13. **Derived data** — empty

# Status: basically an outline

- Let's go through it and review assignments
  - Do we have consensus on each piece?
  - Volunteers, do we agree with assignments?
  - Timeline? (ASAP should be your answer)