

Beyond the ENDF format: Reviewing our implementation plan

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There are three high-level goals for this meeting

- Get feedback from the Japan's nuclear data user community on our plans to move beyond the ENDF format
 - Many thanks to our Japanese hosts for making this possible!
- Bring folks together to make technical progress & decisions
 - Review progress
 - Solicit feedback
 - Discuss next steps
 - Record decisions, raise issues
 - Put everything on the wiki!
- Review our Implementation Plan
 - Draft has been circulated and is on the USNDP GForge website
 - Take a few minutes at the end of each session to review/discuss

Today's topics

- Top-level organization: Specify how nuclear reaction data should be organized
 - Team has reviewed several GND organizational specifications
 - Today's Goal: Review team's current proposed specs, discuss, decide
- Overview of SG38 GForge website
 - Is the current set up useful to everyone? What else can we do to make it more useful?
- Get feedback from Japanese nuclear data users
 - What important needs must be addressed? What are your constraints?
- Low-level data containers: Provide specifications for low-level data containers
 - Team needs to agree on the requirements for the low-level data containers
 - Today's goal: Review and agree on a set of ~10 technical requirements

Tomorrow's topics

- Infrastructure: Develop list of infrastructure functions (name, purpose, inputs and outputs) to make code comparisons easier
 - Tomorrow's Goal: Review list of functions/methods in FUDGE for discussion – is this the right set
- Particle Database: Extend RIPL, provide conversion to a GND-based format
 - Draft translator available
 - Tomorrow's Goal: Develop proposal to RIPL for extensions, review translator/hierarchy
- Quality Assurance: List of QA tests and specifications
 - Initial list of unit tests (from FIZCON and soe additions) available in FUDGE
 - Tomorrow's goal: Discuss goals and requirements for QA tests, brainstorm other unit tests
- API: Document APIs to read/write, code a substantiation
 - Tomorrow's goal: Discuss and agree upon a conceptual design for a nuclear data object

Documentation & governance

- We had a good online discussion of copyright licensing via email
 - Public domain vs permissive/attribute vs “copyleft”
 - I will review current proposal
 - Discussion will probably center around which creative commons license is the best model for our new structure specifications
- Governance
 - Most open source code projects have similar governance models
 - I’ll quickly review 2 models: Wikipedia and Taverna
 - Discussion

Next steps for documentation

- Low-level data containers: Requirements
- Top-level hierarchy for storing nuclear reaction data: Requirements
- Hierarchy for storing particles, level schemes and decays data:
 - Proposal to RIPL for extensions (requirements not being met by RIPL)
 - Document specifications for XML-based version
- Infrastructure for data handling, processing, plotting, etc
 - Description of functions with inputs and outputs needed to standardize cross comparisons
- API for reading and writing data in the new structure
 - Conceptual design of nuclear data object
- Defining the tests that will be needed to assure quality of data
 - Goals and requirements for unit test w/ initial list of tests
- Documentation and governance
 - Draft of governance model for long-term subgroup