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**NUCLEAR ENERGY AGENCY
NUCLEAR SCIENCE COMMITTEE**

Working Party on International Nuclear Data Evaluation Co-operation (WPEC)

WPEC EG-GNDS Meeting

SUMMARY RECORD

23 May 2019

China National Convention Center, Beijing, China

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Organisation for Economic Co-operation and
Development
Nuclear Energy Agency
WPEC EG-GNDS Meeting
China National Convention Center, Beijing, China

23 May 2019

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1 Welcome and practicalities

The chair, **David Brown**, opened the meeting. They welcomed the participants (see Appendix A) and the NEA Secretariat, **Michael Fleming**.

2 Adoption of the agenda and approval of summary records

The proposed agenda (see Appendix B) was adopted at the opening of the session.

3 Review of actions

The list of actions agreed upon in the previous meeting (see Appendix C) was reviewed and the general progress since this meeting has been very good, with nearly all of the action items being addressed. Many of the proposals briefly reviewed during this meeting are direct responses to these actions. The final delivery for many of the changes proposed must be agreed by the Expert Group through a process that must be drafted and itself agreed by the Expert Group members. This is the primary action raised in this meeting and a draft proposal/approval procedure will be made for discussion and adoption in the next official meeting.

4 Presentations and discussion

D. Brown presented an overview of the progress made in the GNDS specifications, originating with the successful translation of the FUDGE-based GNDS-1.9 translation from ENDF-6. D. Brown, C. Mattoon, B. Beck and W. Haecck presented the various proposals that have been developed within the GitLab repository with modification of the content within branches. These were introduced in different ways, ranging from compartmentalised, new sections to commented insertions of new changes.

The participants agreed on two general points:

- A standardised system for making proposed changes should be adopted
- Meetings with only a few hours and fraction of the potentially interested parties cannot adequately approve new formats

The new GitLab system offers a solution to these problems, where proposals may be naturally created, developed, revised and approved via standard **branch** and **merge request** processes. The participants agreed that one documented process for submitting and reviewing proposals should be developed and submitted to the Expert Group participants at the next official meeting at the NEA headquarters. It was proposed that:

- Proposals are identified by individual branches which are stand-alone modifications to the formats repository
- Proposals are approved through merge requests into the master branch
- Merge requests must pass the continuous integration system before being considered by Expert Group members
- Merge request approval should be done remotely if at all possible, due to the significant time required to review proposals and potential for multiple revisions before acceptance

- Proposals are treated as unapproved and their contents unofficial until the merge request is completed
- The approval of a merge request proposal takes two phases:
 - *Approval of reviewers*
 - * The chair of the Expert Group proposes one or more reviewers who must accept the role of reviewer
 - * The proposed reviewers and all Expert Group participants are contacted using the NEA Expert Group mailing list
 - * All members of the Expert Group have 30 days to propose additional reviewers
 - * All proposed reviewers must accept the responsibility of reviewing
 - *Approval of proposal*
 - * Reviewers must provide critical feedback or accept the merge request within 90 days of accepting the responsibility of reviewing the proposal
 - * No proposal may be accepted without at least one approval from one reviewer
 - * After 90 days if no response is provided from the reviewer(s) the Expert Group must be contacted by the chair to allow 30 days to propose any additional reviewers or to accept the proposal if at least one reviewer approved the proposal
- The most recent master branch commit is treated as the current release candidate
- The Expert Group chair reserves the right to review any proposal and provide critical feedback that must be addressed before acceptance of any proposal

For those without the technical ability or interest to develop a proposal and merge request, reporter access may be given to raise issues in the GitLab system, proposing changes that may be addressed in one or multiple branches.

The chair and secretariat agreed to review these suggestions and draft a proposal for the procedure. Separately from the procedure to access changes to the format specifications, a procedure to release a new GNDS version is required. Due to the various restrictions from different institutions in releasing work to the public this will be discussed at the next EG-GNDS meeting and a procedure drafted from that discussion.

5 Any other business

None

6 Date and place of the next meeting

The next meeting of the WPEC EG-GNDS will take place during the week of **24-28 June 2019** at the **OECD-NEA, Boulogne-Billancourt 92100, France**.

7 Actions

The following actions were agreed upon and will be reviewed at the next WPEC EG-GNDS Meeting:

- **Chair/Secretariat:** Review the membership of the EG-GNDS
- **All:** Contact M. Fleming for any EG-GNDS membership or GitLab access issues
- **Chair/Secretariat:** Prepare a draft procedure for formats proposals and approval
- **D. Brown:** Review the option of using `latexdiff` to provide an tool for automatic comparison of drafts
- **All:** Following adoption of proposal/approval process, reformulate proposals as merge requests in accordance with the new procedure

A Participants

List of participants in the **WPEC EG-GNDS Meeting** held at **China National Convention Center, Beijing, China** on **23 May 2019**, organised by represented country or international organisation.

Given name	Name	Country	
Bret	BECK	United States	
David	BROWN	United States	Chair
Michael	FLEMING	OECD-NEA	Secretary
Mark	GILBERT	France	Observer
Wim	HAECK	United States	
Cédric	JOUANNE	France	
Caleb	MATTOON	United States	
Tim	WARE	United Kingdom	Observer

B Agenda

OECD Nuclear Energy Agency
WPEC EG-GNDS Meeting, 23 May 2019

China National Convention Center, Beijing, China
Meeting Room 302

AGENDA

Start	End	Topic	Participant(s)	Country
16:00	16:10	Welcome and review of actions	David BROWN	USA
16:10	16:25	The GNDS-1.9 specifications overview	Caleb MATTOON	USA
16:25	16:40	The NEA GitLab access and use	Michael FLEMING	OECD-NEA
16:40	17:00	GNDS-1.9 status and proposed changes	David BROWN	USA
17:00	17:10	Format proposals: TSL data	David BROWN	USA
17:10	17:20	Format proposals: Resonances	All	
17:20	17:30	Format proposals: Documentation	David BROWN	USA
17:30	17:40	Format proposals: Covariances	All	
17:40	18:00	Discussion	All	

C Previous Minutes

Minutes of the EG-GNDS Side Meeting to the March 2019 NCSP Technical Program Review
PANTEX Facility, Amarillo TX
27 March 2019

GNDS-1.9 must be finished and ready for approval at June's WPEC meeting. The GNDS-1.9 specifications already has 300+ pages and there is more coming (Thank you all!). Anyway, that's a lot for EG-GNDS to review. Let's give everyone about 1 month to review everything we drop on them. So, that means we all have to be done with our reviews by May 1st. It'll probably take all of April to edit and clean this beast up, so we should aim to have all the JSON files and LaTeX in some draft/reviewable state by April 1st. That doesn't give us a lot of time!

C.1 Review of changes to build system

- Doro added choice-like functionality in JSON files (see "childUnique" and "markedAsUnique")
- Dave fixed spelling of "occurrence"
- Wim allowed multiple line descriptions in JSON files
- Dave added basic data type support to JSON files
- Everyone can build the specifications once all the build requirements are met
- ACTION (Dave): Add to README.md a note about basic requirements to build (namely Python3-ish, minted, pygmentize and LaTeX)
- ACTION (Volunteer?, later): Cleanup and simplify LaTeX files and the build system
- ACTION (Dave): Deal with duplicate name/JSON keys to handle element name reuse in different contexts (e.g. "a" or "sum")
- ACTION (Doro): Reenable checking for duplicate name/JSON keys
- ACTION (Wim): Create code and JSON format to handle bodyText in functional data containers to support arrays, tables, etc.. This stuff is in a "free text" field but we impose a structure. The JSON files somehow have to communicate this to code generators (such as Doro's) and the LaTeX files.

C.2 Review of progress on generating GNDS-1.9 specifications

- In the last week or so, the specifications have grown by over 70 pages. This is amazing progress! There is still so much to do though...
- All navigation in the final specifications are handled currently by the gigantic table of contents.
- Dave pointed out LaTeX imposed sectioning: part/chapter/section/subsection. All JSON-generated specifications are subsections, so need sections to organize the subsections rationally. We should not use subsections since the table of contents is already too big.
- We must complete all formats for GNDS-1.9:
 - ACTION (Doro): covariances

- ACTION (Doro, Vlad): covariances for TSL, determine if ORNL/UMich TSL covariance proposal is consistent with GNDS-1.9 covariances.
- ACTION (Dave, Bret): TSL
- ACTION (Dave, Bret): FPY
- ACTION (Dave): charged particle scattering
- ACTION (Wim): functional data containers
- ACTION (Bret): styles
- ACTION (Bret): processed data
- ACTION (Caleb): PoPs
- ACTION (Jeremy, Dave): Intro and conventions chapters need lots of editing and are often uncomfortably XML specific.

C.3 Preparing format requests

- EG-GNDS hasn't decided on a format review process although we expect it to be modeled on the ENDF Format Committee process.
- ACTION (All): Review and comment on Jeremy's format review process at <<https://git.oecd-nea.org/science/wpec/gnds/formats/wikis/Process>
- We must complete all format proposals for "GNDS-1.10":
 - ACTION (Jeremy): JSON friendly formatting
 - ACTION (Dave, Bret): TSL
 - ACTION (Dave, Bret): FPY
 - ACTION (Doro, Wim): resonances
 - ACTION (Bret): map files
 - ACTION (Dave): documentation
 - ACTION (Doro, Vlad): Covariances, esp. for TSL, if ORNL/UMich TSL covariance proposal not consistent with GNDS-1.9 covariances.

C.4 GitLab issues

- ACTION (Dave): Stop using the master branch! You'll break things for everyone else! Make a branch of your own and make a pull request like everyone else!
- Everyone either has access to NEA GitLab or has someone in their group who can help
- Jeremy checked the GitLab settings to lock down the master branch as much as possible. Unfortunately he can't keep maintainers (like Dave) from breaking things.