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I N D C INTERNATIONAL NUCLEAR DATA COMMITTEE

IAEA INTERNATIONAL DATABASE ON IRRADIATED NUCLEAR GRAPHITE PROPERTIES

7TH MEETING OF THE TECHNICAL STEERING COMMITTEE
(16-17 March 2005, IAEA Headquarters, Vienna, Austria)

Prepared by:

D. Humbert[a] and A.J. Wickham[b]

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June 2005

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Abstract

This report summarizes the Consultant Meeting "7th Meeting of the Technical Steering Committee for the International Database on Irradiated Nuclear Graphite Properties" held on 16-17 March 2005 at the IAEA Headquarters, Vienna, Austria. The purposes of the meeting were to review the matters and actions identified in the previous meeting, undertake a review of the current status of the database and to make recommendations for actions for the next year. The purposes of the meeting were fully met. This report contains the current status of the identified actions as well as a summary of the recommendations on enhancements to the database.

June 2005

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IAEA Consultants Meeting, "7th Meeting of the Technical Steering Committee for the International Database on Irradiated Nuclear Graphite Properties"

16-17 March 2005
IAEA Headquarters, Vienna, Austria

EXECUTIVE SUMMARY

Chairman: A.J. Wickham
Scientific Secretary: D. Humbert

Welcome and Opening Remarks

The meeting was welcomed to the IAEA by Mr. Nichols on behalf of the Nuclear Data Section and by Mr. Clark as officer principally responsible for the Database project within the IAEA.

The Chairman then welcomed delegates and reminded them that the meeting had been called ahead of the originally planned schedule in order to address specific issues raised at the previous meeting in September 2004 in the United Kingdom, following consultations with Database users in the individual Member States.

Two principal issues had been that the Version 2 software had been subject to 'bugs' which were still not fully resolved, and that some Observers had taken the view that it had not met a suitable specification despite their involvement in the decisions leading up to the issue of a specification by the IAEA. Secondly, some observers/users were taking the view that Version 2 was actually quite inappropriate, and were divided between those who supported a more sophisticated fully relational software and those who supported the "keep it simple" approach in which data files were not combined into a single file (as in Version 2) and could be sorted and utilised by users employing their own knowledge and expertise to select relevant data. Version 2.1 had now been distributed through the Agency but there had so far been no additional feedback.

A further issue which had arisen since the previous meeting was the withdrawal of the software contractor IDD Ltd of Bristol UK from any further activity with the IAEA Database.

The Chairman requested the meeting to focus upon these issues and to determine a way forward. He also spoke about the lack of a specific timescale for completion of the project, a matter which a number of observers/users felt very strongly was needed in order to focus on the requirements for future support (both financial and manpower), and recommended that the meeting create a suitable timeline with milestones against which performance could be assessed. He also asked for consideration of the QA process for the introduction of data into the Database.

Agenda, Minutes and Actions

The Chairman moved the adoption of the Agenda for the meeting and this was carried *nem con*.

The Minutes of the previous Committee Meeting (September 2004, Plas Tan Y Bwlch, Gwynedd UK), published as INDC(NDS)-466, were accepted without amendment.

In regard to Actions from the previous meeting which were not to be discussed elsewhere in the Agenda, the meeting noted:

Action 1: Each Member States to Convene Discussions with Users to Consider Matters raised at the September 2004 Meeting. The Chairman described the UK meeting which had clarified many of the issues raised from the UK perspective and which had formed the basis of the present Agenda. User discussions had also taken place in JAERI (Japan) and in other situations where there were multiple users.

Action 2: In-Budget funding of the project. It was confirmed that the classification of data was the

problem. If a substantial volume of data could be fully declassified and then made available through the Internet, then it was possible that the Agency could consider such funding. The possibility of achieving this in the short term was regarded as extremely improbable.

Action 5: Extraction and Insertion of Files in Excel Form. Mr. Humbert had resolved this issue and passed a full set of extracted files to Mr. Haag and Mr. Wickham, to be held in confidential form on their personal computers to assist upgrade and re-installation work.

Action 7: E-Mail Discussion List. Mr. Neighbour (UK) did not appear to have made any progress with this proposal from the September 2004 meeting.

All other Actions from the previous meeting were resolved already or became so through discussion in the present meeting.

The Chairman briefly presented the report he had given to the IAEA TWGGCR during its meeting in January 2005 in Manchester, UK.

Form of the Database

Mr. Burchell made a proposal, which was agreed by all present, that the principal focus of the Technical Steering Committee of the Database, should be to acquire as much additional data as possible and place it in the Database in usable form.

Given that there was uncertainty on how to proceed, Mr. Haag noted that all data being prepared for the Database was in the form of Microsoft Excel spreadsheets to a standard template. Most users were far more familiar with the operations available within Excel than with Microsoft Access. Therefore he proposed that, for the time being, data should be retained in Excel spreadsheet form, one sheet for each Report (source). This would make the compilation of new Data and upgraded former data files (added search information such as graphite type etc. explicitly included) extremely easy and, in due course, whatever was decided about the future search capabilities, the Excel spreadsheets would be a suitable source for input. Meanwhile, he suggested, the Database could be made available to users as a collection of Excel spreadsheets, as well as a single file containing all individual spreadsheets, satisfying both the need to make more rapid progress and the wish of a significant proportion of users to be able to make their own selections of input data for their own use based upon their own experience. Excel was considered to be very flexible and hence both “user-friendly” and “expert-friendly”

The issue of CD-ROMs containing Excel spreadsheets of data could maintain the distinctions of Unclassified, Restricted and L2 Restricted through the use of passwords.

This strategy was agreed with no dissent, on the basis that it would allow rapid progress on data input and upgrading to be made, and that the resultant spreadsheets would be suitable for inclusion in whatever future form of sophisticated software might arise for users who wish to make use of more advanced search facilities.

On the question of a more sophisticated “Version 3” searchable software to replace or improve the malfunctioning Version 2, it was clear that there were numerous options for those who felt it was required. Specific suggestions for improvement had been made at the previous meeting in September 2004. Further advice is available from (for example) the IAEA Nuclear Data Section which uses different Database Management Systems (DBMS) than Microsoft Access on systems like LINUX or Microsoft Windows. There was some unease about moving away from Microsoft-based software, but it was agreed that the present committee did not have the necessary expertise whilst others might.

Mr. Humbert offered further information about databases and database management systems. He commented that the Committee should focus more on the specifications for new user interface rather than on the choice of a DBMS and the organization of the data into the database. One point made strongly was that the two-tables approach adopted by IDD for Version 2 does not take full advantage of the relational DBMS capabilities of Microsoft Access. With a different organisation of the tables and their relations, the user interface would have been probably more efficient.

It also needed to be borne in mind that there was a substantial opinion amongst some users that ***all*** that was required was an electronic copy of the original reports, similar to the CEA "DOCMAN" database available to French workers in the field. It was not clear how these disparate views could be resolved to the satisfaction of all potential users, and holding the Database records in more than one format might be the only adequate solution. There was a general view that the preparation of a system which was completely transparent for ***non***-graphite specialists could be costly and would probably not be justified.

Mr. Shibata emphasised the importance of maintaining easy links to graphical functions, as were currently available through Excel.

It was therefore agreed to proceed only slowly towards with a possible Version 3 software, in order to ensure that all stakeholders would be at least generally satisfied with the final outcome. It was then agreed that the first initiative should be based upon an offer made informally by Mr. Gerstgrasser of SGL Carbon, Bonn to Mr. Haag and Mr. Wickham. This would involve consultations between Mr. Gerstgrasser and some advisors to his company about the creation of a fully relational software to be developed from the existing Version 2. Mr. Gerstgrasser had agreed to hold a meeting with Mr. Haag in April (2005) in Bonn to discuss the matter further. There would be no commitment without prior reference to the Technical Steering Committee, but it was agreed that this was a useful first step to producing a specification for Version 3 which could then be discussed with individual users. In addition to a specification being prepared, the costs and realistic timescales for implementation would need to be identified.

The output of these investigations would also then be developed by the committee who were keen to recognise the advantages offered by other aspects of modern computer software, such as the hyperlinking of data to .pdf copies of the original documents, and so on.

Time Schedule for Completion of the Project

The committee moved on to discuss the extent of data likely to be available for inclusion into the Database before the project could reasonably be regarded as "complete", and the timescale for such "completion". In this context, "completion" did not mean a total end to the activities of the Committee since other projects such as data analysis and further software development might become favoured and supported. "Completion" would presently be defined as the acquisition and input of all data which Members could identify as being useful to the project and likely to be available.

In terms of timescale, five years was generally thought to be reasonable although Mr. Shibata commented that in Japan this might be seen as rather too long. In the event, the committee agreed on a series of milestones which would hopefully be completed in four years provided that adequate financial support was forthcoming.

The complete timeline diagram with all agreed targets for inputs and milestones is shown in the ***Appendix***.

This diagram also lists a substantial body of data which is in preparation currently by Mr. Haag and his students, and remaining data which is hoped to be input from Germany, the UK, the USA and from the Petten irradiations in support of the former "Dragon" project (a limited quantity of this information is in the Database already where it has appeared in Dragon-Project reports officially released to the project by the OECD). A detailed discussion allowed certain priorities to be placed on these data which are reflected in the milestones – one unexpected issue was the deterioration of the print in the Petten reports which could become unreadable in part if not processed within the next two to three years. Mr. Burchell provided to Mr. Haag copies of a number of reports on Hanford graphite which had finally been declassified and released to the project, fulfilling an action from a number of meetings ago which had effectively been abandoned as unachievable. He also provided an electronic copy of the H-451 data offered at a previous meeting with the support of Mr. Srinivasan of the US NRC.

No further data are expected to be available from Japan.

It was also agreed that Mr. Smaizys should initiate immediately the translation of 5 Russian-language reports which are not published in any other language, as previously discussed, the funding agreed to be taken from the project and organised directly between him and the IAEA. The selected papers must include numerical data. This to be completed within six months and the output shared with other committee members for review before implementation in the Database.

It was additionally agreed that Toyo Tanso Co. Ltd of Japan should be engaged to resolve issues of character recognition in the existing Japanese data previously submitted on an uncommon disc format, and Mr. Shibata was authorised to negotiate this directly with the Agency also.

Quality Assurance

A discussion on QA of data input followed. The Chairman commented that he had discussed with UK users whether the QA of the original data, or of its copying across to the Database, was in their view at issue. Original data could be in error for a number of reasons and this would not always be apparent, although some obvious typographical and calculational errors had been found during preparation of data by Mr. Haag and he had incorporated appropriate corrections and notes.

Another related issue was a general feeling that data were in some way better authenticated if they were contained in a report which had been subject to some kind of independent scrutiny. Such an issue was important for 21st -century safety cases. Very few of the large body of German data had ever been formally reported by Jülich staff, and it was the existence of these data only in a paper-record form which had originally exercised Mr. Haag to consider the creation of this Database, given the lack of interest in nuclear matters currently within his country. It was agreed that it had to be accepted that such data had a provenance which was every bit as good as data which were in formal reports from the same period, in the view of the graphite specialists. However, Mr Haag said that nominal reports could be written (at a cost, perhaps to be met by the end users requiring the reports) if end users in other Member States were to insist on their preparation. The production of such reports on the German data does ***not*** currently feature in the project plan, unless reasonable arguments for the creation are made by Database users and a source of funding to produce them is identified.

It was considered that all data arising in the period before the late 1980s were potentially poorly QA'd in any case, and that users of these data needed to satisfy themselves as to its adequacy for their current purpose. However, Mr. Haag and others inputting data were making stringent cross checks, repeating calculations on a selection of data, identifying typographical mistakes and inconsistencies, erroneous and missing data (e.g. irradiation temperatures) and so on.

It was agreed that Mr. Wickham would produce, before the end of 2005, a short INDC paper on the Quality Assurance applied to preparation of data for input to the Database, for discussion and review amongst users.

Proposal for Evaluation of Data

Mr. Shibata re-presented a proposal from JAERI for some formal evaluation of the data held within the Database. It was clear that value would be attached (at least in Japan) to having a formal IAEA "endorsement" of particular sets of data seen as relevant to the HTTR developments, under a general heading of "HTR Graphite Design Evaluation and Quality Assessment".

A thorough discussion on what would be entailed then took place. Most members felt that an expert group could be formed *ad hoc* from those with a need to evaluate data anyway for their own purposes. This included Mr. Burchell, Mr. Haag, Mr. Vreeling and Mr. Shibata, together with Mr. Mark Mitchell from PBMR Co. and possibly Mr. Davies from NNC Ltd (UK) who had already offered to assist with QA. It was felt that a clearer definition needed to be worked up to specify more precisely what was required, and Mr. Shibata undertook to prepare a more detailed request for submission to the committee members as soon as possible. This would also be presented to assembled graphite specialists at INGSM-6 in September 2005, together with proposed timescales. Ideally, work would

proceed independently within an identified group of specialists, and their results would be presented to the committee and hence to IAEA for formal endorsement.

It was agreed that such an activity was an important new direction which the project might wish to take, once the prime objective of securing data had been achieved. However, the identification of funding and manpower would determine the extent and rate of progress.

Proposal for the Inclusion of Data on HTR Matrix Materials

After a short discussion, the inclusion of matrix materials was agreed and this now appears as an additional milestone in the timeline (see Appendix).

Decommissioning Data

There had been a number of short discussions on this topic at previous meetings, including a specific request from Lithuania to start a suitable data collection and also interest from EdF CIDEN in France (which had subsequently indicated that the main Database was of little use for that organisation and therefore EdF would not recommend that France formally became a member although CEA may still elect to do so because of its HTR interests).

Mr. Smaizys offered a suggested outline template for information he would like to see collected and shared between decommissioning authorities. This included graphite type, its physical properties and mechanical properties both before and after irradiation, information on impurities and their activation, reactor operating history, potential contamination with additional radionuclides as a result of in-circuit transport, and dose rates on irradiated graphite.

Despite general agreement that relevant data such as content of activity was usually reactor-specific and therefore that the ideal solution was a programme of specific investigations for a particular plant, it was agreed that a template should be drawn up which could be further debated to see whether useful information on a number of systems (if not specific reactors) could be devised and compared in a separate Database. Mr. Wickham and Mr. Smaizys agreed to draw up such a template.

Finance

The currently available funding stood at USD 25,985.44. The Agency were obliged to maintain separate accounts for each *Member State* from which funds had been donated to the project, despite these arising in every case from private companies. This led to a distorted view of the application of funding from some organisations, since the Agency had tended to select a Member State's accumulated funds on a random basis to satisfy specific Invoices from suppliers such as IDD or Mr. Haag (for data assessment and input).

The meeting agreed that it would have been preferable to see all funds donated to this project accumulated together in a single fund.

From the current funding, there was an immediate call for approximately $1000 to satisfy the requirement for document translations and some funding may be necessary to resolve the Japanese character issues. It was estimated that each Module of data input (see Appendix) would cost up to $20,000, giving a total future requirement including the immediate amounts for the Lithuanian and Japanese proposals of approximately $105,000. There is ***no*** provision in this estimate for the costs of producing the QA document (which it was suggested might be covered by the UK as the suggestion had arisen there), ***nor*** for the development of any Version 3 software. There is also no provision in this budget for document scanning since, for the time being, a number of bodies such as NNC Ltd in the UK and PBMR Co. in South Africa had indicated willingness to progress this on behalf of the project as documents became available.

Thus the currently available funding would cover only the immediate requirements together with Module 1 of data input.

Current income was available from the PBMR Co., who had recently signed a renewed agreement with the Agency covering five years (first payment included in above total) and from Graftech Intl. Inc. (ongoing agreement). An oversight had led to a delay in the 2004 payment from SGL Carbon.

Clearly, to achieve the desired new objectives of timescale and content set out in the Appendix, the issue of future funding requires serious consideration by all Member States. At a previous meeting, some UK users had indicated that additional funding might be possible if a timeline was produced. As this had now been done, the funding shortfall would now be drawn to their attention by Mr. Wickham.

The Chairman proposed that all existing sponsors also be allowed time to form an independent view on the nature of their sponsorship following receipt of information about the timeline and detailed proposals for completion of the project through a copy of the Minutes of this meeting. Offers, if any, could be reviewed at a future committee meeting. This was agreed.

Graphite Website and Data Classification

Mr. Humbert drew attention to the status of the Database website on the IAEA systems, emphasising again the value of being able to show unclassified data there. This was noted although, with the majority of current data being in the Restricted category, there seemed no immediate scope to satisfy this requirement. However, all Members agreed to consider within their own States the possibility to downgrade the classification of data already present in the system. Japan had agreed to the removal from the L2 restricted category of a number of items which had been placed there inappropriately since they were published elsewhere. Mr. Wickham had already pressed UK reactor operating companies to consider the need for maintaining an L2 classification on some of their data. Mr. Haag would ensure the correct segregation of data into appropriate categories on future issues of CD-ROMs.

It was agreed that the INDC Reports (minutes of the meeting), not including confidential matters such as the financial status will be accessible on the web.

International Nuclear Graphite Specialists' Meetings (INGSM)

Although INGSM meetings were not official IAEA activities, the committee would continue to be the principal sponsor of these annual meetings which were proving very successful with attendances reaching more than 70 persons in Plas Tan Y Bwlch in September 2004. This meeting, INGSM-5, was voted an outstanding success and the venue in the National Park was greatly appreciated by all.

INGSM-6 would take place in Chamonix, France from Sunday evening 18th September 2005 until the following Wednesday (21st). SGL Carbon were sponsoring the event, and an appropriate hotel had been identified. There had been little further progress in organisation to date. Mr. Pappano at ORNL had prepared a website and was awaiting information for it, which Mr. Burchell undertook to provide. Several members of the organising committee were present (Messrs. Burchell, Haag and Vreeling) and they agreed to ensure that progress with the theme of the meeting and the submission of papers would now be made rapidly. Specifically, Mr. Burchell would undertake a round-robin e-mail of previous INGSM attendees to bring them all up to speed. It was planned to associate at least three other meetings with this event – a meeting of the *ad hoc* ASTM committee on nuclear graphite standards, to be organised by Mr. Burchell, and a meeting of the OECD NEA Expert Group on "Microstructure-property relationships in irradiated graphite, SiC and C/C composites at high temperatures", to be organized by Mr. Hall of The University of Manchester, UK. A third proposal came from Mr. Methnani of IAEA to associate a meeting on HTR Graphite Waste Management, in which Mr. Wickham might be involved in the organization.
It was provisionally agreed that a presentation on the use of the Database in Excel form, and a presentation of possible alternatives gleaned from the involvement of Mr. Gerstgrasser, should take place at approximately 11am on the final day, Wednesday September 21st 2005.

Mr. Burchell proposed that INGSM-7 in 2006 would be hosted at ORNL in the USA in their new conference facilities, which were shown to the committee in a PowerPoint presentation. It was hoped

that the US DoE would sponsor this event. This was agreed. There was a need to avoid a clash of dates with the planned HTR gathering in South Africa in September 2006, and Mr. Burchell would look into this before fixing dates.

Database Membership

The Chairman advised the committee and the IAEA that a membership application from the Republic of Korea was imminent. The committee recommended to the Agency that this application should be accepted on the basis of future provision of ion-irradiation data. The Chairman also noted that he had recently held an informal discussion, initiated by Mr. D. Nicholls of the PBMR Co, about why South Africa was not a member. Mr. Nicholls had agreed to investigate this possibility.

Date of Next Meeting

It was felt that there may be no need to hold another formal Committee Meeting in September 2005, as had originally been planned, but that an informal presentation on database progress would be given to attendees at INGSM-6 in Chamonix as noted above, where they would be given an opportunity to comment on the committee's decisions and timescales. The meeting was undecided whether to wait until the occasion of INGSM-7 to hold a formal Committee Meeting at ORNL, and the decision at that point was deferred.

Subsequent to the conclusion of the Committee Meeting, those members remaining for a final night in Vienna took the opportunity to discuss this again at length on an informal basis. Messrs. Burchell, Haag, Shibata and Wickham participated in this additional discussion. All commented on the efficiency of the present meeting (where no observers had been present) compared with the Plas Tan Y Bwlch meeting where the number of observers had overwhelmed the formal committee and where some differences of view had been irresolvable at the time. However, the value of observers' advice and opinions in shaping developments so far was acknowledged by all.

It was therefore agreed, *subject to the consent of absent members and the IAEA*, that future formal IAEA Database Committee Meetings would be scheduled in March each year, in Vienna, which was a convenient time and location for all current representatives. At these meetings, as required by the Working Arrangement, current sponsors (only) would be invited to send ***one*** representative as observer (it being incumbent upon the IAEA to ensure that this requirement was set out in letters of invitation). Member States' representatives should continue to gather advice and opinions from their own Database users ahead of the formal Committee Meetings, to ensure that other's views were taken into consideration.

The technical steering committee would also ensure that a full presentation and discussion on Database issues took place at each INGSM meeting, which would usually be taking place in September or October of each year. The opinions expressed by other graphite specialists would then be fed back to the formal members of the Committee for debate at the next IAEA CM.

Actions from the 7th Meeting

1. Mr. Neighbour (UK) to be reminded about his proposal for an e-mail discussion list.
2. Mr. Haag to meet informally with Mr. Gerstgrasser (SGL Carbon, Bonn) in April 2005 to discuss informally some possible options for a comprehensive relational software development ("Version 3").
3. Mr. Smaizys to initiate the translation of 5 suitable Russian-language papers containing

numerical data, after agreeing a mechanism for funding to approximately USD 1000 with the Agency.

4. Mr. Shibata to organize with Toyo Tanso Co. Ltd the resolution of incompatibility of Japanese and European character sets which had led to uncertainties in some Japanese data input, after agreeing a mechanism for funding with the Agency.
5. Mr. Wickham to prepare a short INDC report concerning the QA of data input by the end of 2005.
6. Mr. Shibata to prepare a specific proposal "HTR Graphite Design Evaluation and Quality Assessment" for the evaluation of data in accordance with JAERI suggestions, for presentation to possible partners at INGSM-6 in September 2005.
7. Mr. Haag and others to prepare a suitable presentation on the interim Database format and future options, for INGSM-6.
8. Mr. Smaizys and Mr. Wickham to consider a possible template structure for a separate database on decommissioning data.
9. Mr. Burchell to identify all remaining GA reports available for data inclusion by the end of 2005.
10. ***All*** to adhere to the timeline and milestones identified in the Appendix to this note, and to bring them to the attention of Database Users and possible Sponsors in their own Member States.

Appendix A

IAEA Consultants' Meeting: "7th Meeting of the Technical Steering Committee for the International Database on Irradiated Nuclear Graphite Properties"

16–17 March 2005, Building-C, Floor-7 and Room-37 (C07-37), IAEA Headquarters, Vienna, Austria

Chairman: Dr. A.J. Wickham (United Kindom)
Scientific Secretary: Dr. D. Humbert (IAEA)

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Appendix B

IAEA Consultants' Meeting: "7th Meeting of the Technical Steering Committee for the International Database on Irradiated Nuclear Graphite Properties"

16–17 March 2005, Building-C, Floor-7 and Room-37 (C07-37), IAEA Headquarters, Vienna, Austria

Chairman: Dr. A.J. Wickham (United Kingdom)
Scientific Secretary: Dr. D. Humbert (IAEA)

MEETING AGENDA

Wednesday March 16th 2005

0900 Welcome *(IAEA, Chairman)*

Adoption of the Agenda

Minutes of the Previous Meeting *(September 2004)*: INDC(NDS)-466

Matters Arising *(which are not covered elsewhere in the Agenda)*

Report on Database Activity presented to the TWGGCR, January 2005: AJW/REP/053/05

Review of National Database Users Meetings – Re-Definition of Users Preferred Database Format and Capabilities *(or Report by National Liaison Officers if no national meeting has taken place)*

Coffee Break

Define Purpose of Present Meeting and Required Decisions/Conclusions [1]

Review of Version 2.1 Capabilities and Deficiencies *(including Data Capacity limitations imposed by Microsoft Access)*

Review Any Available Information available on the Possibilities to upgrade to a more comprehensively searchable Version 3 *(NDS)*

Review the Possibility to return to a system where data from individual Reports remain Segregated

Review the Merits/Demerits of Direct Report Archiving as .pdf files *(either in place of, or in addition to, data extraction)*

Lunch

Extraction of Data Files from Version 1 for Upgrading *(NDS?)*[2]

Insertion of New Templated Data into Version 2+ *(NDS?)*[2]

Scope for Wider Involvement of Committee and/or Appropriate Specialists in Reviewing and Templating Data

[1] It is suggested that this should include: the nature of the Database structure for the future; the role of the committee; the activities of the committee and individuals; the funding of the project; a timetable for the submission and entry of data which is achievable; etc.

[2] These issues were meant to be covered by IDD but no appropriate information has been provided.

Funding *(to include update on current funding from IAEA, but to consider wider options for funding professional help where needed)*

Setting a Timescale for the Completion of the Project[3]

Coffee Break

[At this point, it is hoped that sufficient information on all issues relevant to possible routes forward will be available to the Committee

General Discussion on the Future Database Structure *(remainder of first day)*

Thursday March 17th 2005

0900 Continuation of General Discussion on Future Database Structure

Coffee Break

Resolutions

Agreement on Implementation *(including production of a realistic timeline for completion).*

Lunch Break

[Option to Continue Discussion if Issues are Unresolved]

Graphite Website: availability of meetings reports (INDC)

Financial status and sponsorships.

Status of Membership *(e.g. Korean application)*

INGSM-6, Chamonix *(Organising Committee Representatives)*

INGSM-7 *(Burchell)*

Schedule of Future Database Committee Meetings *(in the context of the agreements and task schedules reached - options include Meeting in September as previously arranged and then annually; deferring the September meeting, etc. etc.)*

Any Other Business

Estimated Close 1530 - 1600h
Chairman's Comment

Given that this meeting has been called exceptionally, to deal with issues raised at the previous open

[3] UK users consider that the project is not sufficiently focussed on specific goals, and hence is allowed to "drift" almost indefinitely with slow progress. They have requested that the project should define its goals, its purpose and its timescales, and that additional funding options would be easier to achieve if a clear programme was available. In other words, the required programme should define the funding requirements, rather than the other way around.

Committee Meeting in September 2004, it is extremely important that each committee member is well briefed with their national database users' interests and, perhaps, takes some time to consider ahead of the meeting what they think we should do.

The context, simply is the following:

Version 2.1, although apparently satisfying the specification previously arrived at, subject to some unresolved programming issues, was not in the end welcomed by those users, some of whom wanted far more sophisticated search capability, others who preferred the volume-related Version 1. A sizeable vote in favour of archiving reports in full (in some cases, ONLY archiving the reports) has also been registered.

We must resolve the way forward, both for the Database and for our Committee.

The comment that we have become unfocussed and have no clear timescales, is a valid one. We have tended to hide behind the poor funding situation by having work done by "enthusiastic amateurs". A view is emerging that we should make clear the *true* costs of a professional completion of our task, since this might generate more financial support, especially if we create a credible timeline for the "completion" of the project. This may well involve national representatives in arranging for more time to be devoted in their own countries to assist in achieving this aim – after all, if their users want the Database, they can probably contribute some time and effort (and/or money) to make it serve their needs. An obvious basic requirement would be that data submissions should be templated at the point of origin, if we continue to follow the individual data entry option.

Currently, we have no software contractor and one overworked data preparer.

I look forward to an interesting meeting!

A.J. Wickham

Appendix C

Proposed "Worst-Case" Timeline For IAEA Graphite Database Project 2005-2009

Date	Module 1 Data Input (Haag)	Module 2 Data Input (Haag and Wickham)	Module 3 Data Input (Haag)	Module 4 Data Input (Haag, Vreeling)	Module 5 Data Input (burchell, Haag)	Module 6 Data Input (Haag)	Document QA Procedure for Data Input (Wickham)	Translation of Russian Papers (Smaizys)	Data Evaluation Project (see F/Note)	Version 3 Project (Relational Search Functionality)
April 2005	"Beavan" H451 Data "Binkele" IE1-24 and IM1-24 data (KFA) Data Rev. 3 of ATR-2E and ASR-1R (replacement file) UK DFR Data	Upgrade files from Version 1.3: UK files – AJW Rest – Haag Upgrade files from Version 2.1, covering missing or incomplete data: ATR-2E (Petten) ASR-1R (Germany) BNWL 1672 (USA) Mitsubishi L2R files segregated Doctoral Thesis and Toyo Tanso data Bordeaux Conference etc.			(Burchell): Identify remaining GA Reports to be made available			Provide translation of first five papers	Prepare proposal (Shibata) SEE FOOT/NOTE	Discussions with Mr. Gerstgrasser, SGL Carbon
May 2005										
June 2005										
July 2005										Response desired from SGL Carbon specialists
Aug 2005									Proposal Complete	
Sept 2005										
Oct 2005							Draft available	COMPLETE	Presentation and proposal to INGSM-6	Possible Discussion at INGSM-6
Nov 2005										
Dec 2005							COMPLETE			
Jan 2006	COMPLETE				Identification Completed					
Feb 2006										
March 2006	**Issue CD – (Excel)**		Latest H-451 compilation ex ORNL/NRC				IAEA issues INDC(NDS) Report	Review and determine if more to be translated	Review and determine next action	Review Options at Technical Steering Committee

April 2006			Compilation ex ORNL/NRC HTK7 HFER Irradiation Data 6 Hanford ETR Irradiation Reports							
May 2006										
June 2006								Further translations ??		
July 2006										
Aug 2006										
Sept 2006										
Oct 2006										
Nov 2006										
Dec 2006										
Jan 2007		COMPLETE								
Feb 2007										
March 2007		**Issue CD – (Excel)**								
April 2007			COMPLETE	Petten Data from Dragon Project Data from Russian Language Papers						
May 2007										
June 2007			**Issue CD – (Excel)**							
July 2007										
Aug 2007										
Sept 2007										

Oct 2007										
Nov 2007										
Dec 2007										
Jan 2008										
Feb 2008										
March 2008				COMPLETE	OC Series from ORR (USA) Data from Further GA Reports as identified above INET Results Additional Data from Carbon Journals papers				IAEA Endorsement ??	
April 2008										
May 2008										
June 2008				**Issue CD – (Excel)**						
July 2008										
Aug 2008										
Sept 2008										
Oct 2008										
Nov 2008										
Dec 2008					COMPLETE	Data on Matrix Materials Any other identified Data				
Jan 2009										

Feb 2009										
March 2009					**Issue CD**					
April 2009										
May 2009										
June 2009										
July 2009						COMPLETE				
Aug 2009										
Sept 2009										
Oct 2009										
Nov 2009										
Dec 2009										
Jan 2010										
Feb 2010										
March 2010						**Issue Final CD**				

	Colour indicates Steering Committee Meeting Scheduled
	Colour indicates interim position to be achieved by date
	Colour indicates milestone to be achieved by date

Acceleration on these timescales may be achieved if additional persons are engaged in data preparation; this may in turn be dependent upon the funding rate for the project.

All timelines and milestones subject to annual review by the Technical Steering Committee.

Also to be considered at appropriate point: *form of USER GUIDE for Excel-style CD issues*

Footnote on proposed Data Evaluation Project:

Project to be driven by JAERI initiative. HTR Graphite Design Evaluation and Quality Assessment. Possible partners considered to be JAERI/PBMR/ORNL/NRG Petten/NNC Ltd

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