

JBC Winter 2006 Meeting (Albuquerque) Minutes:
Call to Order

Chairman Barry Ganapol (Univ. of Arizona) called the meeting to order at approximately 11AM on Nov 12, 2006. The **JBC** member's list is included as **Attachment A**. In attendance were the following **JBC** members and affiliate members:

R. Amato	B. Ganapol	R. Little	R. Mosteller
Y. Azmy	A. Sood	C. De Oliveira.	
B. Kirk	W. Martin	D. Cokinos	
B. Ganapol	J. Hendricks	P. Angelo	

Open Discussion

An open discussion preceded approval of the (June) Reno **ANS** meeting minutes as written in the last (4th) **JBC NEWSLETTER**. P. Angelo, who has been a strong supporter of the **JBC**'s mission, indicated that there are willing customers in the criticality and shielding areas waiting for reliable benchmarks. Angelo challenged the **JBC**, in its benchmarking capacity, to contact these individuals with the intent to promote funding for our effort. C. De Oliveira reinforced this notion by stating that from his vantage point he sees V&V becoming a much larger effort in future and that the **SINBAD** benchmark collection will play a significant role. R. Mosteller cautioned that if we are to secure funding then we, as an organization, need a higher level of commitment from its members. In particular, our membership should take their time commitment more seriously, which is difficult since we are a completely volunteer group. We also need to do a better job in archiving the benchmarks already approved to gain a credible reputation in the nuclear community.

JBC Website

One of the import areas for **JBC** visibility will be the **JBC** website. As mentioned at the previous meeting, B. Kirk will host our site as a part of the **RSIC** site. There, we will post all of the approved benchmarks as well as those pending approval. In addition, the archives of the **M&C**

Computational Problems Benchmark Committee (**CPBC**) will be available. The **NEWSLETTER** will be posted along with a standing call for benchmarks and participation from the membership or other interested parties. It is foreseen that the website will be a central part of the **JBC**. Hopefully, the initial site will be operational during summer.

JBC Award

Recognition is a necessary aspect of a functioning organization. Therefore, it has been suggested that the **JBC** establish a “Benchmark Award”. It is not clear what form this award should take—given by conference or annually?. Should there be award categories?—one per member division? To help define the award’s concept, an award subcommittee of three was established consisting of C. de Oliveira, Dick Amato and a member from **RPD** to be determined. The committee will report on their progress at the June meeting.

JBC Initiated Benchmark Proposals

The chair raised the question of whether the **JBC** should initiate benchmark

requests in specific areas. To this point, the **JBC** has only solicited benchmarks from its membership and asked for participation. Currently, there are several such benchmarks actively under consideration. The question is-- Should the **JBC** also identify areas where benchmarks are needed and issue a call for benchmark proposals? This is one possible way to expand on our service function. Of course, we would have to specify how this would be done. This issue will be addressed at a future meeting.

Funding Sources for V&V

With V&V becoming a major activity in industry as well as at national laboratories through the Global Nuclear Energy Partnership (**GNEP**), it seems a natural niche for the **JBC**. The issue is how do we take advantage of this opportunity especially in the context of a volunteer effort. Funding will be a central issue, since only with funding will the effort be taken seriously by the **JBC** membership. One possible mechanism is to ask for funding from interested divisions. There seemed to be little enthusiasm for the concept however.

News from the Member Divisions

RPD: Reported by R. Mosteller

1) Proposed Doppler Benchmark

A special session at the upcoming **M&C** topical meeting (**M&C/SNA '07**) to be held in Monterey California in April will feature a Doppler benchmark which has also been resubmitted to the **JBC** for approval. At this point, the interest has been overwhelming with over 120 solution submittals. It is anticipated that **JBC** will have approved this benchmark before the meeting.

RP&S: Reported by R. Little and R. Amato

1) ENDF/B-VII Release

CSEWG will release **ENDF/B-VII** in December. Unfortunately, there seems to be a lack of a benchmarking culture in **CSEWG**. It is hoped that **CSEWG** is aware of the existence of the **JBC** and will in future use our services to enhance their offerings.

MCD: Reported by B. Ganapol, P. Ravetto, Y. Azmy

1) ADS Benchmark

Piero Ravetto filed a written report regarding the subcritical Accelerated Driven Systems (**ADS**) benchmarks activity with which he is currently involved. **ADS** Benchmarks have been initiated under the auspices of the **IAEA** as a Coordinated Research Project (**CRP**). This is a joint project between several European states and Belarus. Several benchmarks are proposed which will include both experimental measurements and theoretical investigations. Measurements at the Yalina facilities in Minsk are planned in the near future and will feature thermal subcritical structures and a decoupled fast and thermal zones. Piero's task is to develop analytical and numerical kinetic benchmarks to obtain reference results, and he will eventually ask the **JBC** to approve his benchmarks.

2) Azmy 3D Benchmark

Yousry Azmy, presented an overview of his recently proposed benchmark, "Benchmarking the Accuracy of Solution of 3-Dimensional Transport Codes and Methods over a Range in Parameter Space, which is actually over 700 benchmarks. It is a 3D benchmark for a prism source within a prismatic cavity. The benchmarks include variations on boundary conditions as well as convergence studies making up the 700 or so cases. A lot of his effort has

gone into organizing the submission so that it will be relatively easy for proposers to set up inputs and submit results. A meeting at the **M&C** topical is planned to provide guidance to proposers. This benchmark is a proposed **OECD** activity to be supported by Enrico Sartori.

3) Analytical Benchmark Session

An analytical benchmark session (proposed by B. Ganapol) based on the **TIEL** benchmark previously approved by the **JBC** is scheduled for the **M&C** topical to be held in Monterey California (**M&C/SNA '07**). 15 request for participation have been sent with about 4 responses indicating interest in participating. Ganapol will lead off the session with a review of his new book *Analytical Benchmarks for Nuclear Engineering Applications (Case Studies in Neutron Transport Theory)* which is in press [publisher OECD/NEA].

New Benchmarking Efforts

The Medical Physics Working Group (MPWG)

B. Kirk reported that the **MPWG** continues in its effort to generate interest in developing benchmarks and benchmark submissions for the radiation therapy/radiation oncology community. Several benchmarks are on the **MPWG** website. This effort is leading the way in the benchmarking effort and the working group should eventually become a full member of the **JBC**. The **JBC** membership is encouraged to visit the **MPWG** website in particular to view the Brachytherapy Dose Benchmark.

Plan to attend the JBC meeting at 11AM June 24. Room TBA.