

**THE INTERNATIONAL ASSOCIATION
FOR THE PROPERTIES OF
WATER AND STEAM**

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Canada
Czech Republic
Denmark
France
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**Minutes of the Meetings
of the
Executive Committee
of the
International Association for the Properties of
Water and Steam**

**Buenos Aires, Argentina
July 21-27, 2002**

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Minutes of the Meetings
of the
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Buenos Aires, Argentina
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Plenary Session. Monday, 22 July 2002

The President of IAPWS, Dr. Bert Rukes, welcomed the EC and other IAPWS members to Buenos Aires for the EC and WG Meetings of IAPWS. He then introduced the Chairman of the Argentine-Brazil Binational Committee, Dr. Horacio Corti, who welcomed IAPWS to Buenos Aires and CNEA. Dr. Corti indicated that the meetings would take place in the Institute of Technology “Prof. Jorge Sabato” for Materials Science and Technology. The Manager of the Atomic Centre, Dr. Christina Cambiaggio, then added her welcome to all the delegates.

The President then officially opened the 2002 EC Meetings by introducing the National Delegates. Each of the member countries of IAPWS was in attendance with the exception of Italy and Russia. He particularly welcomed the new IAPWS Associate Member Delegate, Professor Marc Assael.

1. Adoption of Agenda

A provisional agenda had been posted on the IAPWS Website for all IAPWS members by the Executive Secretary in February 2002. The President indicated two additions to this agenda, and then requested any other additions and changes to the agenda. There were no further suggestions for additional items. The agenda was then approved by the Heads of all National Delegations and forms Attachment 1 of these minutes.

2. IAPWS Business and Appointment of Committees

2.1 Press Release.

The President asked Bellows, Cooper and Gallagher to serve on this Committee. The Press Release is discussed in Minute 17.6 and Attachment 13.

2.2 Evaluation Committee on International Collaboration.

The President indicated that one proposal had been received by the Executive Secretary prior to the meeting. The President reminded the EC that the Committee to review any proposals received by the end of the day would consist of the WG Chairmen, with the President and Executive Secretary as ex. officio members. He requested that Zeijseink be the Chairman of the Committee. The discussion of this Committee is reported in Minute 14.1 and Attachments 8 and 9.

2.3 Electronic Download Committee.

The President reminded everyone that this item related to Minute 17 from the Gaithersburg Minutes. The appointed chairman (Harvey) was delayed in arriving into Argentina, so discussion of this item was delayed until the Friday EC Meeting. See Minute 17.2.

2.4 Helmholtz Award Committee

The President indicated that nobody had been nominated for this Award in 2002 and that this was a little disturbing as IAPWS was trying to attract new young scientists. He then reminded the EC that the Helmholtz Committee for the 2003 award would consist of the Delegates from Germany, Japan, Russia, USA, and Argentina/Brazil. The President asked the German Delegate (Wagner) to be the Chairman and to report back to the EC on Friday with the names of the members of this committee (Minute 15.2). The procedures to be followed are delineated in the 1999 EC Canada Minutes.

2.5 IAPWS Atlas

The President requested an update from one of the Editors of the Atlas (Palmer).

Palmer indicated that:

- Harvey had replaced Tremaine as an IAPWS Editor
- The Editors have received 10 draft chapters of which 9 have been reviewed
- Members of PCC would review the chapters, and Britain and Ireland have agreed to review all the chapters for English
- The latest estimate for preparing the chapters into a uniform approach is about \$15,000.

The President requested a further update of the activities to the EC on Friday. This is reported in Minute 17.3.

2.6 IAPWS on the Internet (IAPWS Website www.IAPWS.org)

The President indicated that this item was very closely related to Minute 2.3 and again referred to Minute 17 from the Gaithersburg Minutes. There the President had proposed “Each National Committee of IAPWS should determine, if possible, the legal situation in their own country, and send a statement to the President and Executive Secretary by March 31, 2002”. The one received from the US indicated that the US National Committee believed that IAPWS needed professional legal help. The President indicated that he had checked with his own company also. The President then proposed that a Committee consisting of Harvey (Chairman), Friend, Okita and the President as ex.officio, should meet during the week and report back to the EC on Friday with a direction for IAPWS to take. This discussion is provided in Minute 17.2.

2.7 IAPWS Structure

The President indicated that he had requested the WGs in Gaithersburg to review the IAPWS Structure that had been developed during the last IAPWS Meeting in Argentina in 1990. As there had only been a few suggestions from PCC and PCAS, the President had requested that a small committee under the Chairmanship of Majer prepare a short document for discussion in Argentina. This Chairman indicated that there hadn’t been very much activity since the last EC Meeting. The President indicated that as this was a very important item for the continuation of a vibrant IAPWS, he would like to ask a small committee of past IAPWS Presidents (Levelt Sengers as Chair, Watanabe, Fernandez-Prini and Cooper) to think about the Structure of IAPWS, discuss it with the current WG Chairmen and provide feedback to the WG Chairmen by Wednesday so that the WGs could discuss the item further on Thursday. This item is discussed further in Minute 17.4.

2.8 Other Business Considered to Require Special/Extensive Discussions

The President asked the EC if there were any other items that needed to be raised. The Head of the Japanese National Committee, Watanabe, indicated that Japan would host the 2004 ICPWS and that there was a need to form the International Program Committee so that feedback could be provided at the EC on Friday. The President indicated that this committee historically has included the WG Chairmen, the Executive Secretary and the Host Country Conference Chairman. He also requested the Chairman of the last ICPWS, Tremaine, to provide input to this group during the week. The 14th ICPWS is covered in Minute 17.1.

2.9 New Products

The President indicated that an Action in Minute 18.4 of the Gaithersburg Minutes had asked the Editorial Committee to review the Statutes and By-

Laws with regards to any necessary changes or additions for “Informatory Notes” and “Documentation and Software”. This item was delayed until the EC on Friday. See Minute 17.5.

2.10 Gibbs Award

The President indicated that a new Awards Committee needed to be set up. The Executive Secretary reminded the EC that this committee consists of one representative of the EC and a member nominated by each WG (not the chairman). The President requested that each WG nominate somebody for this Committee at the EC Meeting on Friday. See Minute 15.3.

3. EC Mandate to Working Groups and Membership

3.1 Releases, Guidelines and Certified Research Needs.

The President indicated that a Release and a Supplementary Release would be discussed during the week, and that two new ICRNs would also require WG review and editing to be ready for approval by the EC on Friday. The Executive Secretary indicated that ICRNs 1, 5, 10, and 13 will need action by the respective WGs during the week

3.2 IAPWS Electronic Minutes

The President asked the EC if anybody had had any problems in downloading the 2001 IAPWS Minutes from the IAPWS Website. He then confirmed that in 2002 copies of the minutes would not be mailed to members, but that they would be available on the Website. Hard copies of the Minutes can be requested from the Executive Secretary. The Head of the German National Committee (Wagner) requested that an electronic version of the IAPWS Membership list be provided to each National Committee.

The President stressed that the WG Reports to the EC on Friday should only contain those items needing approval or action by the EC. All other items should be included in the WG Minutes.

4. Preview by WG Chairmen of Weeks Activities

President Rukes requested each WG chairman to provide an overview of their respective planned meetings and activities throughout the week. The details of these WG meetings are covered in detail in Minutes 7, 8, 9, and 10.

Activities During the Week

The first day activities of the WGs and Executive Committee were followed by WG meetings from Monday–Thursday. The IAPWS Symposium “Advances in Basic and Applied Research in Hydrothermal Systems” was held on Wednesday, 24 July 2002 at the National Library. The Symposium program is given in Attachment 2.

The full IAPWS program for the week is shown in Attachment 3.

Executive Committee Meeting. Friday, 26 July 2002

President Rukes opened the continuation of the EC Meeting at 8:35am. All members of IAPWS were present except Italy and Russia. He first asked if there were any additional items that should be added to the Agenda. None were suggested.

5. Acceptance of Minutes of Previous Meeting

President Rukes asked for comments and changes to the minutes of the EC meeting held in Gaithersburg, in September 2001. None were provided, thus the 2001 Minutes were accepted.

6. President’s Report

President Rukes provided the following comments:

- this had been a normal year for IAPWS with work progressing on the Atlas, on new Releases and ICRNs
- last year he had requested that the WGs determine whether the structure of IAPWS was still applicable, and he indicated that he had raised this important issue again. The results would be discussed in Minute 17.4
- IAPWS had had a very productive week in Washington in September 2001 despite the terrible events that had occurred during the week. The President wanted to thank, on behalf of IAPWS, the US Committee for their excellent support during this time. He also wanted to thank personally the Members for their understanding and delay in returning home.

7. Report and Recommendations of Thermophysical Properties of Water and Steam Working Group (TPWS)

Chairman Friend highlighted the following activities from the TPWS working sessions during the week, some of which had been joint meetings with IRS. Full minutes can be found in Attachment 4.

- 7.1 The Task Group “Uncertainty of IAPWS-IF97 in Enthalpy” has decided that the “Informatory Note” proposed in 2001 does not meet the needs that have been established. A document on the uncertainty of IAPWS-95 in enthalpy, and one describing the uncertainty of IAPWS-IF97 in enthalpy, will be produced for adoption in 2003.
- 7.2 When the above item is adopted by IAPWS, the TPWS and IRS Working Groups recommend that the Release “IAPWS Skeleton Tables 1995 for the Thermodynamic Properties of Ordinary Water Substance” be officially withdrawn.

The EC approved this unanimously

- 7.3 TPWS (together with IRS) proposes and endorses two new ICRNs. One is on the thermodynamic properties of metastable steam, and one is on the thermophysical properties of humid air and combustion-gas mixtures.

The EC approved these two new ICRNs unanimously

- 7.4 The D₂O Task Group is preparing a revised release on the thermodynamic properties of heavy water (revised for change in temperature scale only) to be proposed for adoption in 2003; see also item 7.8.
- 7.5 The 2002 annual revisions to the Fundamental Constants guideline (only two updates of references) were endorsed by the WG.
- 7.6 Blangetti will be drafting an ICRN on needs for transport properties in ammonia-water mixtures, to be presented in 2003.
- 7.7 A document will be prepared for proposed adoption in 2003 listing all IAPWS products for thermodynamic properties and discussing the relationships between them and appropriate uses for each. A Task Group of Cooper (chair), Harvey and Wagner will work on this document.
- 7.8 Assael was added to the Transport Properties Task Group; the Task Group will prepare revised releases for the viscosity and thermal conductivity of heavy water—for change in temperature scale—to be proposed for adoption in 2003.
- 7.9 Harvey was appointed to represent TPWS on the committee for the IAPWS Gibbs award.
- 7.10 The membership of Hendricks (USA) is withdrawn. TPWS wishes to nominate five new members: Assael (Greece), Baptista Filho (Brazil), Kadrnitzka (Czech Republic), Knobloch (Germany), and Span (Germany).

The EC approved these new members unanimously

8. Report and Recommendations of Industrial Requirements and Solutions Working Group (IRS)

Acting Chairman Weber provided the IRS Report to the EC. Full minutes can be found in Attachment 5. Acting Chairman Weber mentioned that there were numerous Joint Sessions with TPWS and that he would only report on those items not covered by Chairman Friend.

8.1 Progress report of the Evaluation Task Group for the “Documentation and Software of TTSE Method applied to IAPWS-95 as an Example.” The TG evaluated the technical aspect and reports fulfilment of requirements regarding accuracy and speed. The TPWS and IRS WGs recommend the acceptance of this product. However, the outcome of the EC discussion of software aspects may require changes to the document by the editorial committee. The two WGs do not require reassessment in that case.

8.2 Backward Equations to IAPWS-IF97 for Region 3. An informal survey reports strong need for these backwards equations. The development of the backwards equations were completed fulfilling the requirements. The WG recommends forming an Evaluation Task Group with Miyagawa as Chair, and Okita, Gallagher, and Weber as members. The evaluation report will be completed by March 2003, the draft of a supplementary release will be sent to WG members and the Editorial Committee in April 2003, and the final release document will be sent to the Executive Secretary in June 2003 for postal ballot.

8.3 The WG nominates Span (Germany) for WG Membership

The EC approved this WG Membership addition unanimously.

8.4 The working group nominated Miyagawa to the Gibbs Award Committee

9. Report and Recommendations of Physical Chemistry of Aqueous Solutions Working Group (PCAS)

Chairman Majer provided the PCAS Report to the EC. Full minutes can be found in Attachment 6. Chairman Majer mentioned that there were numerous Joint Sessions and Workshops with other WGs during the week.

9.1 Activity of the working group. The Chairman indicated that the WG had discussed improving efficiency by establishing flexible and temporary task groups members from and outside IAPWS for 2 – 4 years working on selected topics:

- Tasks groups established for pH of water (complement and broaden the report of S. Lvov by the end of 2003)

- Task group established for standard properties of aqueous nonelectrolytes
 - Modified schedule for the “Atlas” (November 30, 2002 – the last dead line for manuscripts)
 - Guideline for the Henry’s law constant
 - Work on NaCl(aq) needed
- 9.2 Role of PCC and its relationship to PCAS. The Chairman summarized the areas discussed:
- Bringing up new topics
 - Collaboration with PCC in fundraising in the member countries (European projects),
 - One workshop during the IAPWS conference is not enough,
 - Continuing contact during year
- 9.3 Membership. The Chairman made the following recommendations to the EC:
- New members of PCAS: Marsik, Sedlbauer (both Czech Republic) and Peters (The Netherlands).
 - Membership to be cancelled; Oscarson, Macdonald

The EC approved these membership changes unanimously.

- 9.4 International Collaboration. The Chairman indicated that the WG had developed one collaborative project between the Prague Institute of Thermomechanics and ORNL. The President indicated this would be discussed later together with other proposed projects (Minute 14.1).
- 9.5 ICRNs and Guidelines. The Chairman indicated the following activity
- 11 (salts in steam, Palmer/Fernandez-Prini) and 12 (electrode reactions) closing statements required by the end of October 2002
 - 10. (pH studies, Lvov) continuing
 - Formulation of two new ICRNs (NaCl(aq)) desirable)
 - Guideline for the Henry’s constant of gases in water, slight modifications suggested

At this stage the EC questioned whether the proposed ICRN on NaCl should actually be an ICRN. After much discussion it was decided to send a letter to NIST indicating an expression of need.

- 9.6 IAPWS Conference in Kyoto. The Chairman indicated that the WG would like to see the following key words associated with the ICPWS conference title:
- high temperature, aqueous systems, energy production, environment

- 9.7 The Chairman indicated that the WG had selected Tremaine as the representative for the Gibbs Award Committee.

10. Report and Recommendations of Plant Cycle Chemistry Working Group (PCC)

Chairman Zeijseink highlighted the key items from the WG meetings and those activities that needed action/approval by the EC. A full written report forms Attachment 7.

- 10.1. Chairman Zeijseink indicated that the WG had selected Daucik to be the representative for the Gibbs Award Committee
- 10.2. The Chairman indicated that the PCC usually at this point presents a Priority List of items important to Power Plant Chemistry. However, this year in conjunction with the discussions on the structure of IAPWS (Minute 17.4), the Chairman requested each National Committee to provide the PCC WG with a list of issues based on NC discussion of major topics within the country in terms of reliability loss, capacity loss, corrosion costs, etc. These would then form the basis at the 2003 meetings to develop a new priority listing of items, which would address Power Plant Chemistry issues.
- 10.3. Chairman Zeijseink next wished to inform the EC that WG Member Daucik had verbally reported to the ESPPA Committee that was developing a guideline for boiler water. This drafting committee had decided to make the guidelines non-mandatory
- 10.4 The Chairman recommended to the EC the following WG Membership changes:
- New members: Olavessen (USA), Uchida (Japan), Maughan (Germany)
 - Transferring member from PCAS: Jensen (Denmark).
- The EC approved these WG Membership changes unanimously.**
- 10.5 The Chairman next indicated that the WG had discussed six possible topics for ICRNs.

11. Editorial Committee Report

Chairman Harvey reported on the Editorial Committee activities since the last EC Meetings in 2001.

- 11.1 The Editorial Committee was not asked to review any proposed IAPWS products during the course of the year. However, it was asked to review several documents during the course of this IAPWS week. The Chairman strongly encouraged the EC that at future IAPWS meetings new documents are provided to the Editorial Committee well in advance of the Annual Meeting if they are intended for adoption at the meeting.
- 11.2 The Editorial Committee was asked to examine the Statutes and By-Laws to see if they had provisions relevant to issuing new types of products (like “Informatory Note” or “Documentation and Software”). While the Statutes and By-Laws specifically mention some types of products (like Releases), they also say that the Executive Committee can authorize whatever products it wishes. So there is no need to change the Statutes or By-Laws in order to issue new types of products. However, the By-Laws currently list several types of products, and the current language does not always reflect current IAPWS practice. The Chairman suggested that the EC should consider revising this part of the By-Laws to properly describe Releases, Supplementary Releases, Guidelines, ICRNs, and possibly other products.
- 11.3 The Chairman commented that the term “Informatory Note” adopted in 2001 for one proposed product does not sound good in English, and suggested the term “Advisory Note” instead.

The EC approved this name change unanimously.

12. Membership and Associates

12.1 Members Defaulting on Dues.

The Executive Secretary indicated that according to the latest Swiss bank account statement (30 June 2002), the following countries had not paid the 2002 IAPWS dues: Argentina, Canada, France, Italy, Germany, and Russia. In 2001 Canada and Russia had also not paid their dues. The Delegates from Argentina, France and Germany indicated that the dues payments were in process.

- 12.2 The Executive Secretary next reported that he had received a letter from the Head of the Italian National Committee (Sigon) indicated that because of the current economical situation the Italian Committee had ceased to exist. This raised some discussion by EC Members. The consensus was that the Italian Committee had been a good member of IAPWS for the last five years and would be allowed to remain as a Member for another three years. Individual members from Italy would also be encouraged to remain as WG members.

13. Executive Secretary's Report

13.1 Financial, Auditors and Dues

The Executive Secretary reported that IAPWS was on a sound financial footing with currently over SFrs 138,000 in the Swiss bank account and over \$8,500 in the US account for a total of \$101,374 combined. The status as at 30 June 2002 in the bank accounts had been provided to each National Delegate present at the EC meeting.

The Executive Secretary next reported that the 2001 financial statements had been forwarded to the Auditors in January 2002. Both VDI in Germany and Mr. Miyagawa in Japan had reviewed and approved them. The financial statements for 2001 and the Auditors reports had also been provided to all the National Delegates present.

The Executive Secretary proposed that these organizations continue to act as auditors.

The EC approved this unanimously.

The Executive Secretary proposed to the EC that the dues structure for member countries remain unchanged for 2003.

The EC unanimously agreed to this proposal.

The Executive Secretary also provided a rough estimate of the future expenditures for 2002.

13.2 Time and Place of the 2003 Meetings

The Executive Secretary asked the delegate from Denmark to provide a few details of plans for the 2003 meetings.

Delegate Daucik wanted to invite the EC and WGs to Denmark in 2003. He indicated that the Danish Committee was very flexible about dates. However, after some discussion by the EC, the week of 24-29 August 2003 was selected. Details will be worked out with the Executive Secretary early in 2003, a website will be created and information will be available through the IAPWS website.

14. Guidelines, Releases, Certified Research Needs, International Collaborations

President Rukes indicated that discussion on Guidelines, Releases and ICRNs had been dealt with during the WG presentations.

14.1 International Collaborative Projects.

The President asked the Chair of the Committee (Zeijseink) to report on the discussions during the week. The Chairman indicated that two proposals had been received. The details of these proposals are provided in Attachments 8 and 9. The Chairman summarized the proposals in the order of committee ranking:

- 1) The IAPWS Sponsors are Assael (Aristotle University, Greece) and Friend (NIST, USA). A Greek young investigator, Ifigenia Metaxa, would travel to NIST in the USA for four months to address formulations for the viscosity and thermal conductivity of water and heavy water.
- 2) The IAPWS Sponsors are Marsik (Institute of Thermodynamics, Czech Republic) and Palmer (Oak Ridge National Laboratory, USA). A Czech young investigator, Thomas Nemec, would travel to Oak Ridge for five months to address the thermodynamics of binary nucleation in superheated steam.

After some discussion by the EC with the President indicating some concern about the financial outlay for IAPWS over the next year for the ICPWS and Atlas, as well as for these Collaborative Projects, the EC was asked to approve these two projects.

The EC approved both projects unanimously, but wanted it to be recorded that it was an extraordinary case that both had been approved.

15. IAPWS Awards

15.1 IAPWS Honorary Fellowships

The President reported that Dr. Robert Fernandez-Prini had been elected Honorary IAPWS Fellow, following the established procedure and after unanimous approval through the postal ballot conducted by the Executive Secretary. The Fellowship Award had been presented to Fernandez-Prini at the IAPWS Dinner on Thursday evening.

The President next discussed the Awards Committee and requested that Wagner (Chair) and Cooper should remain as the members of the Awards Committee, and that the same procedures should be followed for any IAPWS Honorary Fellowships in 2003.

15.2 IAPWS Helmholtz Award

The President asked the appointed chairman to name the members of the Helmholtz Award Committee for the 2003 award. The Committee will

consist of: Germany (Wagner as Chair), Japan (Nakahara), Russia, USA (Harvey), Argentina/Brazil (Japas). Nominations will be due to the Executive Secretary by January 31, 2003.

15.3 IAPWS Gibbs Award

The President reminded the EC that the following people had been elected by the WGs during the week: TPWS (Harvey), IRS (Miyagawa), PCAS (Tremaine), and PCC (Daucik). The President then requested nominations from the EC to Chair this important committee. None were suggested so the President requested that Fernandez-Prini chair the group. The President next indicated that nominations can be provided by National Committees and Working Groups, and that any nominations should be sent to the Executive Secretary by 31 May 2003. The Executive Secretary was requested to send out the procedures to be followed to each NC and WG as well as the Awards Committee.

16. Election of Officers for 2003 and 2004

The President indicated that he would step down at the end of 2002 and that Vice President Watanabe will assume the position of IAPWS President on January 1, 2003. According to the Statutes, the election of the next Vice President should be made at the end of the EC meeting in even years. The President and Executive Secretary had checked the recent history and proposed that the Czech National Committee should be asked to nominate one of their committee members for the position. The President asked the EC if there were any other suggestions. None were suggested, so he then requested the EC approves this selection.

The EC unanimously approved this selection.

Action: The Czech National Committee should inform the Executive Secretary of their nomination for Vice President after the next meeting of their committee, and before the end of 2002.

17. New Business

17.1 14th ICPWS

The Chairman of the Japanese Organizing Committee, Watanabe, reported on the progress for the 14th ICPWS in Japan. He indicated that the dates would be August 29 – September 3, 2004. He indicated that the Program Committee (IAPWS WG Chairmen and the Executive Secretary) had met during the week and would meet again after the EC meeting. The main items to be discussed this week were: the main and sub themes for the conference and conference symposia, the timing of the next meeting of the

program committee, the proposed fees, estimate of participants, and the proceedings.

17.2. IAPWS on Internet, and Electronic Download/Copyright/Liability

The President requested the Chairman of these activities, Harvey, to provide the lead for discussion.

First the Chairman provided an update on the IAPWS Website. This is included as Attachment 10. Next he presented the results of the Committee's discussions on downloading of software during the week. This is included in Attachment 11. The main discussion for the EC was whether IAPWS should have software as a product or part of a product, either available on the website or through the Executive Secretary. Much discussion followed by the EC about the legal ramifications and that possibly IAPWS would need to pay for legal assistance. Another item was how IAPWS could deal with support and maintenance. The consensus was that IAPWS should not have software as a product, but this was not voted on by the EC. The discussion then flowed to the ability of National Committees to authorize implementation of software relating to IAPWS Products. Finally a motion was formulated for EC approval: "If a National Committee authorized implementation of an IAPWS Product, then IAPWS will provide a link on the IAPWS Website".

The EC unanimously approved this motion.

Next the President indicated that the TTSE Method needed to be approved and asked for the timescale. This will need to be reviewed by the Editorial Committee regarding the change in scope and IAPWS product type, and then forwarded to the Executive Secretary by the end of August 2002 for a Postal Ballot.

17.3. IAPWS Atlas

The President indicated that this item had been covered in the PCAS WG presentation to the EC (Minute 9), but did want to remind everybody that the final date for manuscripts was 30 November 2002.

17.4. IAPWS Structure

The President requested the Chair of the Committee formed at the Monday EC Plenary session (Levelt Sengers) to provide a status report. The Chair indicated that during the week there had been much activity, which included two meetings of the committee, and two interfaces with the WG Chairmen. Attachment 12 provides a detailed account. Many issues were raised regarding future power generation, including new technologies, reduced emissions, and increased efficiency. No immediate need for restructuring the WGs was felt, but PCAS and PCC expressed the

intention to become more product-focused, and to have a number of joint Task Groups. PCAS's initiatives in arranging joint WG sessions were acclaimed and will be continued. PCAS and TPWS stressed expanding the IAPWS role to education of the public, as well as of electric power engineers. An extensive discussion of IAPWS directions followed, including expansions beyond steam power generation, outreach to the hydrothermal community, increased frequency of the ICPWS, and a name change of the organization. It became clear that direction could not be clearly formulated in the time remaining. The President and the EC then formulated the following approach: Attachment 12 plus a set of questions prepared by the Committee Chair, in consultation with the other members of the committee and the WG Chairmen, will be sent by the Executive Secretary to National Committees and WG Chairmen. Feedback will be required before the next EC Meetings in Denmark.

17.5 New Products

The President reminded the EC that New Products was covered in the Editorial Committee Report (Minute 11). He then requested discussion on how to characterize the TTSE Method because the result of the discussions on Software (Minute 17.2) was that the EC, at this time, would not vote on having software as an IAPWS product, and thus the original suggestion of "Documentation and Software" was not appropriate. After some discussion he formulated a motion to the EC to call the TTSE an IAPWS Guideline.

The EC unanimously approved this motion.

The President then reminded the EC that the Editorial Committee would review the names of products within the IAPWS Statutes and By-Laws.

17.6 Press Release

The President requested Bellows to present the News Release to the EC. This is contained in Attachment 13.

17.7 Review of Progress of Research in Member Countries

Written reports on progress in member countries were not reported to the EC but were distributed to other members and the Executive Secretary during the IAPWS week. They are attached to these minutes as follows:

Britain and Ireland	Attachment 14
Czech Republic	Attachment 15
Denmark	Attachment 16
France	Attachment 17
Germany	Attachment 18
Japan	Attachment 19

USA
Greece

Attachment 20
Attachment 21

17.8 Participants

Attachment 22 provides a list of participants at the EC and WG Meetings in Buenos Aires in July 2002.

17.9 List of Members

An up-dated list of members of the Executive Committee, Working Groups, and Honorary Fellows will be developed by the Executive Secretary. This will be forwarded electronically to the Head of each National Committee.

18. Closing Remarks and Adjournment

The President formally closed the 2002 EC meetings at 3:00pm.