ISO/IEC JTC1/SC22
Languages
Secretariat: CANADA (SCC)

OCTOBER 1989

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ACTION: For review and action as appropriate by SC22 Member Bodies.

ISO/IEC JTC1/SC 22
RESOLUTIONS Prepared at the Third Plenary Meeting
Berlin Germany FR
1989-09-26/29

Resolution 98: Preparation of International Standards

ISO/IEC JTC1/SC22

- expresses its appreciation of the work already done by the ISO/IEC Central Secretariat regarding acceptance of camera-ready and machine-readable texts for publication as Standards and Technical Reports; and

- expresses the hope that the Central Secretariat and national secretariats will continue to develop these practices towards universality and exchangeability of documents.

Resolution 99: Delays with JTC1 Turnaround

ISO/IEC JTC1/SC22 acknowledges with thanks the recent improvements in distribution of JTC1 documents, but expresses its concern that difficulties of communication are still being experienced by the SC22 secretariat, which SC22 requests the JTC1 secretariat to address.

Resolution 100: Copyright

ISO/IEC JTC1/SC22 requests JTC1 to provide guidance on how working groups can protect copyrights and hence the integrity of documents, while still allowing their wide distribution.

Resolution 102: Formal Description Techniques

ISO/IEC JTC1/SC22 recommends to JTC1 that, as a result of continuing developments in the field of Formal Description Techniques (FDTs), the rules currently governing the use of FDTs in JTC1 standards (as shown in SC22 N655 section 6.5.1.6) be modified to allow for the use of
a) as at present, FDTs which are standardized or in the process of standardization, or
b) alternatively, recognized, publicly available, well-documented and technically well-founded formal definition methods, or
c) as a third alternative, where this is necessary (for example in the formal definition of an FDT), further forms of FDT which are defined within the document using this method.

Resolution 102:   OSCRL

ISO/IEC JTC1/SC22 instructs its secretariat to communicate with
the JTC1 secretariat to communicate with the JTC1 secretariat to
obtain the necessary official documents needed to transfer the
OSCRL work item from SC21 to SC22 and to enable the work on this
project to continue within SC22 without further delays.

Resolution 103:   Revisions of standards

ISO/IEC JTC1/SC22 requests its liaison representative to ISO/IEC
JTC1/SC2 to request that future revisions of SC 2 standards
include, by DP stage, information describing how the revisions
differ from the existing standard.

Resolution 104:   Use of functionality of existing standards

ISO/IEC JTC1/SC22 reminds WG conveners that ISO and IEC seek to
reduce unnecessary diversity, and therefore recommends its
working groups to make every effort to adopt the functionality of
an existing standard in a new standard.

Resolution 105:   CEN/CENELEC Harmonization

Since CEN/CENELEC is reviewing the X/Open (XPG3) documents as a
prENV, and since XPG3 overlaps or references standards and
work-in-progress of ISO/IEC JTC1/SC22 Working Groups, ISO/IEC
JTC1/SC22 therefore instructs its secretariat:

     - to request ISO/IEC-CS to forward, for receipt before
1 January 1990, the documents listed below to the Secretary-
General of CEN/CENELEC;

     - to express SC22's interest in the harmonization of ISO and
CEN/CENELEC standards;

     - to indicate that SC22 wishes, with the hope that such
harmonization will be achieved, to point out the following areas
of overlap between the work of XPG3 and the standards and work in
progress of SC22:
          For COBOL: ISO 1989:1985
               Fortran: ISO 1539:1980   (currently under revision)
               Pascal: ISO 7185:1984
               Ada: ISO 8652:1987
               C: ISO 9899   (currently DP)
               System Interface:
                          ISO 9945-1   (currently DIS)
               Shell & Utilities:
                          ISO 9945-2   (currently DP)

- to indicate that, similarly, SC22 invites input and suggestions for extensions to SC22 work as reflected in the XPG3 materials, to be forwarded to the appropriate working groups, including:
ISAM
Transport Interface
Curses Interface
Internationalization
Source Code Transfer
COBOL Extensions; and

- to suggest therefore that CEN/CENELEC consider these documents for use in the development of European norms.

Resolution 106:   Membership of WGs

ISO/IEC JTC1/SC22
- expresses its concern at the problems which are being experienced by some of its working groups, in particular WG11 - Binding, and WG18 - FIMS, in recruiting and maintaining a sufficiently active membership to carry out their work effectively; and

- instructs its secretariat to write to member bodies and, where appropriate, working groups, requesting them to take any actions necessary to solve these problems.

Resolution 107:   WG Communication

   (i)   ISO/IEC JTC1/SC22instructs its working group convenors, in accordance with ISO/IEC JTC1 N385, clause 3.3.6, to send a copy of each WG document to at least

      (a)   SC22National Member Bodies,

      (b)   SC22Secretariat,

      (c)   ITTF, and

      (d)   up to two nominated members of the working group from each participating member body;

   (ii)   ISO/IEC JTC1/SC22requests that national member bodies

      (a)   communicate the appropriate address to each convenor if the documents should be sent to an address different from that shown in the ISO Memento; and

      (b)   advises each convenor of the names and addresses of the nominated members of the working group, indicating which are to receive papers.

(iii)   Since it is the practice in some member body
          secretariats only to file for reference documents
          received via (i)(a) above, ISO/IEC JTC1/SC22advises its
          working group convenors to send documents requesting
          action from national member bodies via the
          SC22secretariat.

Resolution 108:   Disbandment of WG12, and Appreciations

ISO/IEC JTC1/SC22
     - notes that its working group WG12 - Conformity Testing and
Validation has completed its work item;

     - disbands its working group WG12;

     - thanks all members of the working group who participated
in the work; and

     - expresses its special appreciation to Dr. Jacqueline Sidi
for her work as convenor of WG12, and to Dr. Sidi and
Ms. Kate Ainsworth for their work in editing the two technical
reports produced by WG12.

Resolution 109:   Use of WG12 Technical Reports

ISO/IEC JTC1/SC22 recommends to the convenors of its working
groups that they use N715 (presentation of the Technical Reports
produced by WG12) to ensure that the two Technical Reports on
conformity (TR 9547 and TR 10034) are understood by their working
groups and are used in the preparation of programming language
standards.

Resolution 110:   Synchronization

ISO/IEC JTC1/SC22
     - adopts the synchronization modus operandi documented in
N730

     - instructs the convenors of working groups currently using
national body development to submit such a synchronization plan
to the secretariat for SC22 distribution by the end of July 1990.

Resolution 111:   Annual Plenaries

ISO/IEC JTC1/SC22 adopts the principle of one year intervals
between plenary meetings as from 1991, on the following
conditions:
1.   Working group convenors are instructed to submit a written
     report to the plenary meeting, but the presentation of the
     report can be made by an appointed representative of the

working group if the convenor is unable to be present in person.

2.   Where there are problems existing within a working group, convenors are requested to make every effort to attend the plenary meeting for discussion of the issues.

Japan - abstain, for reason financial.

Resolution 112:   WG Convenors

ISO/IEC JTC1/SC22 appoints the following as working group convenors:

     WG4 - COBOL: Ms. Linda Willis
     WG9 - Ada: Dr. Robert Mathis

Resolution 114:   Liaisons

ISO/IEC JTC1/SC22 appoints the following liaison officers:
     ISO/IEC JTC1/SC 1:   Mr. Rainer Zimmer (FRG)
     ISO/IEC JTC1/SC 2:   Dr. Miles Ellis (UK)
     ISO/IEC JTC1/TSG-1: Mr. Jim Isaak (USA)
     ISO/IEC JTC1/SWG-EDI: Mr. Klaus Appel (Sweden)
and thanks the member bodies concerned for bringing forward their names.

Resolution 115:   Possible New Work Item - C++

ISO/IEC JTC1/SC22
     - notes that considerable interest has been expressed in a possible New Work Item on the C++ language; and

     - requests the US member body to prepare and forward to the SC22 Secretariat a New Work Item proposal for C++, and if possible to put forward the name of a proposed convenor for an SC22 Working Group on C++ language, if and when it is established.

Resolution 116:   Proposed New Work Item - VDM-SL

ISO/IEC JTC1/SC22
     - notes that a second JTC1 letter ballot is now in progress on the New Work Item on Vienna Development Method Specification Language (VDM-SL);

     - instructs its secretariat, if and when the New Work Item is approved, to take the necessary steps to establish Working Group 19 - VDM-SL; and

- authorizes the appointment of Mr. Derek Andrews (UK) as convenor of WG19 - VDM-SL, if and when it is established.

Resolution 117:   WG 11 - Remote Procedure Call

Since there is an apparent overlap in work being done by ISO/IEC JTC1/SC22/WG11, SC22/WG15, the ECMA RPC group, and ISO/IEC JTC1/SC21/WG7 - Open Distributed Processing,

ISO/IEC JTC1/SC22
       - requests that the work by SC22.WG15, ECMA RPC and SC21/WG7 in this area be performed in such a way that there is no conflict with the work being done by WG11; and

       - requests the WG11 convenor to ascertain who are the convenors of these groups, and communicate with them to explain the nature and current progress of relevant SC22 work items and enclosing the latest versions of the relevant working documents.

Resolution 118:   Geneva and Paris ad hoc meetings on character
                         requirements

ISO/IEc JTC1/SC22 thanks those who initiated, prepared, and were involved in the ad hoc meetings on character requirements for their competence and dedication and for the resulting reports N622R and N623R, with particular appreciation of the work of Mr. Robert Kearney, Mr. François Genuys, Mr. Quyen Tran, and Mr. Joseph Côté.

Resolution 119:   Formation of ad hoc group on character
                         requirements

ISO/IEC JTC1/SC22
       - anticipates that ISO/IEC JTC1/SC2 and SC22WGs will have some queries concerning N622R and N623R; and therefore

       - establishes an ad hoc group on character requirements with the following terms of reference:
       (a) to respond to such queries; and

       (b) to revise N622R and N623R before the next SC22 Plenary
            meeting;

       - instructs the ad hoc group to work by correspondence as far as possible;

- requests its working groups to review N623R from the point
of view of their language and send comments as soon as possible
to the ad hoc group;

- requests the UK member body to nominate Dr. Miles Ellis as
convenor; or, if Dr. Ellis is unable to take on this task,
requests the USA member body to nominate a convenor.

Abstain - Sweden.

Resolution 120:   CEN/CENELEC Harmonization - Request to Member
                       Bodies

Since CEN/CENELEC harmonization of standards depends on common
membership with ISO, ISO/IEC JTC1/SC22 therefore

- requests that SC22 Member Bodies which are members of
CEN/CENELEC review prENV 40 002, which is based on the X/Open
PG3, in light of the overlap with SC22 work as outlined in
resolution --;

- requests that these member bodies assist the achievement
of convergence and harmonization in the areas of overlap between
the work of SC22and the work of CEN/CENELEC.

Resolution 121:   Character requirements

ISO/IEC JTC1/SC22
- endorses the principles expressed in N622R, as amended by
N622R2, as programming language recommendations for ISO/IEC
JTC1/SC2 standards and asks SC2 to consider them;

- understands that SC2 may require additional information
and justification regarding the content of these documents; and

- charges the SC22 Ad Hoc group on character requirements
with providing such information and justification.

Resolution 122:   Character requirements - Attribute Registry

ISO/IEC JTC1/SC22 requests the UK member body, after consultation
with the ad hoc group on character requirements, to propose a New
Work Item to establish an Attribute Registry (as outlined in
N667), to be associated with the initial list of characters
contained in ISO 10646 (currently at DP stage).

Resolution 123:   Internationalization

ISO/IEC JTC1/SC22 requests the SC22 secretariat to forward the New Work Item proposal in N693R to JTC1 for letter ballot, and request that for the project be assigned to SC22 if approved.

Resolution 124:   Revision of ISO 7185 - Pascal

ISO/IEC JTC1/SC22
    - notes that the revision of ISO 7185 - Pascal has involved correction of errors, clarification of ambiguities, improved specifications, and rectification of editorial and typographical mistakes, but no substantive change to the Pascal language; and

    - resolves that processing of this work item will continue in accordance with JTC1 directive 6.12.2, namely the SC22 Secretariat will circulate the revised ISO 7185 document, N727, to SC22 P-members for letter ballot, and if the ballot is successful will submit the document directly to the ITTF for publication.

Resolution 125:   Processing of DP 10206 - Extended Pascal

ISO/IEC JTC1/SC22
    - notes that the technical work on DP 10206 - Extended Pascal is essentially complete, the DP ballot process and second public review having involved correction of errors, clarification of ambiguities, improved specifications, and rectification of editorial and typographical mistakes, but no substantive change to the Extended Pascal language;

    - notes that the German Federal Republic member body is now prepared to change its negative vote to positive;

    - notes that WG2 - Pascal has responded to the negative vote from the French member body but that there is no prospect of that vote being changed from negative to positive, since it is based not on objections to the technical content of the document but to the principle of an Extended Pascal standard; and therefore

    - instructs the SC22 Secretariat to forward the DP 10206 - Extended Pascal document, N728, to JTC1 for DIS processing and ballot.

Resolution 126:   Subdivision of work item JTC1.22.24 -
                     Extended APL

ISO/IEC JTC1/SC22
       - notes that WG3 has reached agreement to on many features
of Extended APL but has failed to reach consensus on some of the
proposed features;

       - recognizes that it is possible to continue progress on
Work Item JTC1.22.24 by proceeding with an Extended APL standard
containing the agreed features and a type 2 Technical Report
documenting those features on which consensus could not be
reached; and therefore

       - authorizes the subdivision of work item JTC1.22.24 -
Extended APL as follows:

       JTC1.22.24.01 - Extended APL
       JTC1.22.24.02 - Further extensions to APL

Resolution 127:   Registration of Modula-2 DP

ISO/IEC JTC1/SC22
       - notes that the second working draft of the Modula-2
standard (N682) reflects the consensus view of WG13 - Modula-2 as
agreed at its fourth meeting, is substantially complete, and is
in the form anticipated for the standard;

       - notes that further editorial work has been done on the
draft since N682 was circulated; and therefore

       - instructs its secretariat to register the third working
draft of the Modula-2 standard (i.e. the next revision of N682)
as a Draft Proposal; and

       - requests the WG13 convenor to provide SC22 secretariat
with this third working draft in the time for DP registration by
31 October 1989.

Resolution 128:   Processing of DP 10279 - Full Basic

ISO/IEC JTC1/SC22
       - notes that the latest draft of DP 10279 - Full Basic,
circulated as N696, is believed to incorporate the corrections
and changes in organization approved at the last WG8 meeting,
including resolution of comments;

       - notes that UK member body is now prepared to change its
negative vote to positive, subject to a final review within the
UK of N696; and therefore

       - instructs its secretariat to forward N696, or a corrected
version submitted by the WG8 convenor, to JTC1 for DIS processing

and letter ballot, as soon as confirmation is received from the UK of its change of vote;

- recommends the withdrawal of ISO 6373 - Minimal Basic as soon as DP10279 - Full Basic becomes an International Standard;

- recommends that WG8 submit ANS X3-113A-1989 "Modules and simple character input enhancement to Full Basic" for approval as an addendum to ISO Full Basic.

Resolution 129: Subdivision of work item JTC1.22.90 - Programming Language C

ISO/IEC JTC1/SC22
- authorizes the subdivision of work item JTC1.22.20 - Programming Language C as follows:
   JTC1.22.20.01: C language
   JTC1.22.20.02: normative Addendum on C Integrity;

- notes that work item JTC1.22.20.01 will deal with the further processing of DP9899;

- invites member bodies to submit nominations for project editor for the Integrity Addendum;

- urges WG14 to ensure that the Integrity Addendum be produced as soon as possible, and that it includes the resolution of

   (a)   ambiguities; and

   (b)   character handling issues.

Resolution 130: PL/I - Late Processing

ISO/IEC JTC1/SC22 notes the concerns included in the report of the PL/I project editor outlined in N683 about the delays in referencing the actual versions of the ANSI Standard in the ISO Standard, and therefore requests its secretariat to ask the JTC1 secretariat to expedite the DIS Ballot on ISO 6522.

Resolution 131: Ada/SQL - Language Interface

ISO/IEC JTC1/SC22 instructs its Secretariat to remind the JTC1 Secretariat of our previous request (Resolution 59, Washington, DC, SC22Plenary, ISO/TC97/SC22N406) that the NWI on Ada/SQL Language Interface be assigned to SC22/WG9, and to forward to JTC1 Secretariat N713 "Liaison Statement from SC22/WG9 - Ada to SC 21/WG3 - Database" as a further explanation of our reasons.

Abstain - USA.

Resolution 132:   Subdivision of work item JTC1.22.02 - Fortran

ISO/IEC JTC1/SC22
    - authorizes the subdivision of work item JTC1.22.02 -
Fortran as follows:
    JTC1.22.02.01 - Revision of ISO 1539 - Fortran; and
    JTC1.22.02.01 - Variable length character string module;

    - notes that SC22 documents relevant to JTC1.22.02.02 are
N680 and N723; and

    - requests the German Federal Republic member body to
provide a project editor for JTC1.22.02.02.

Resolution 133:   Fortran

ISO/IEC JTC1/SC22
    - records its intent that the second DP 1539 be the basis of
the international Fortran standard and that in the interest of
timely adoption of this standard no further changes should be
made other than corrections of errors and inconsistencies in
response to member body comments; and

    - to accelerate further the progress to DIS stage, requests
the convenor of WG5 to convene a meeting of WG5 immediately after
the end of the second DP ballot period if significant changes are
requested in member body ballot comments.

Resolution 134:   Fortran 77

ISO/IEC JTC1/SC22 notes the interest of the USA member body in
retaining Fortran 77 as a national standard after the adoption of
Fortran 8X;

    - notes also the technical recommendation of WG5 not to have
more than one Fortran standard nor to have any subset; and
- requests WG5 to work together with the US Fortran committee
(ANSI X3J3) to find a solution which reconciles these conflicting
positions, and report this to the next SC22Advisory Group or
plenary meeting.

NOTE: Austria is relying on US X3 to review and consider the
         outcome of this work.

    The UK notes that the USA MB's help, following the
Tokyo meeting, was well appreciated and hopes the same help
will be available. With this hope,the UK MB will not
abstain.

Resolution 135:   ISO-DTR 10176 - Guidelines

ISO/IEC JTC1/SC22
    - notes the distribution for JTC1 letter ballot "Guidelines
for the Preparation of Programming Language Standards" as a
Type 3 Technical Report;

    - regrets the delay in the processing of this document by
the JTC1 Secretariat; and

    - thanks the project editor Mr. Brian Meek of the UK for his
work in completing the Technical Report.

Resolution 136: Subdivision of work item JTC1.22.21 - POSIX

ISO/IEC JTC1/SC22
    - approves the following division of work item JTC1.22.21 -
POSIX, including work on the revision of the current 9945
document (references to IEEE projects being shown in brackets):

JTC1.22.21.01   Information Technology - Portable
                 Operating System Interfaces for Computer
                 Systems (POSIX)
                 Part 1: System Interfaces

                 Sub-parts:
                 Language Independent Base   (IEEE
                 P1003.1)
                 Real Time and Extensions   (IEEE P1003.4)
                 Distribution Services   (IEEE
                 P1003.8)

                 Transparent File Access
                 Remote Procedure Call
                 Protocol Independent Application
                    Portability Interface
                 Namespace and Directory Service

                 C Language Binding   (IEEE P1003.1)
                 Ada Language Binding   (IEEE
                 P1003.5)
                 Fortran Language Binding   (IEEE P1003.9)

JTC1.22.21.02   Information Technology - Portable
                 Operating System Interfaces for Computer
                 Systems (POSIX)
                 Part 2: Shell and Utilities
                 Sub-parts:
                 Shell and Utility Application Interface
                    for Computer Operating Systems
                    Utilities   (IEEE
                 P1003.2)

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                   User Portability Environment          (IEEE
                   P1003.2a)
JTC1.22.21.03  Information Technology - Portable
                   Operating Systems Interfaces for Computer
                   Systems (POSIX)
                   Part 3:  System Administration          (IEEE
                   P1003.7)
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    - and notes that it is expected that these will be presented for approval in multiple sub-parts, not as single complete documents, the numbering being consistent with ISO numbering procedures.

Resolution 137:   DP Registration of POSIX Shell and Utilities document

ISO/IEC JTC1/SC22
    - approves the registration of the document "Shell and Utility Application Interface for Computer Operating System Environments, P 1003.2/Draft 9, 29 August 1989", provided by the US member body, as a Draft Proposal; and

    - requests the SC22 Secretariat to renumber the current 9945 Document in a manner consistent with the division of work item 22.21, as approved in Resolution S.

Resolution 138:   WG 15 - POSIX: Rapporteur group participation

ISO/IEC JTC1/SC22 urges its member bodies to nominate participants for the WG15 - POSIX rapporteur groups on security, internationalization and validation, and requests member bodies to forward names and addresses to the WG15 convenor as soon as possible.

Resolution 139:   POSIX - Project Reporting

In view of the increased and growing size of project JTC1.22.21 - POSIX and the correspondingly increased and growing demand, in SC22 and its member bodies, for experts to cover this work. ISO/IEC JTC1/SC22
    - requests the convenor of WG15 to provide, as a part of his regular progress reports to SC22, the following information concerning IEEE projects, in addition to the corresponding information on WG15's activities, required to make clear to the committee and its member bodies all of the resource-related, organizational, and managerial requirements and consequences of the project:
        the topics and subtopics;
        the architecture;
        the positioning of the topics within the architecture;

the schedules;
the status of work;
the key changes of direction; and
the planned meeting dates.

Resolution 140:   POSIX Harmonization

ISO/IEC JTC1/SC22 requests WG15 to provide to SC22 a strategy paper showing how WG15 is going to harmonize its work with the work of other relevant bodies in the field of open system specifications, such as NIST, CEC, CEN/CENELEC, JTC1/TSG-1, and X/Open.

Resolution 141:   DP Registration

ISO/IEC JTC1/SC22 instructs its secretariat to forward a document for DP registration if:

1.   the responsible working group so recommends; and

2.   either: the document is complete,

       or: the document identifies areas where decisions are required and the unresolved areas constitute a very small proportion of the document; and

3.   a letter ballot has been successful,

       or: ISO/IEC JTC1/SC22 agrees at a plenary meeting to the DP registration, having received a document which is substantially the same as that to be registered in sufficient time for prior consideration,

       or: ISO/IEC JTC1/SC22 agrees at a plenary meeting to the DP registration, on the basis of a report on the progress of the working group and the status of the document.

Resolution 142:   Appreciation - Miss Mabel Vickers

ISO/IEC JTC1/SC22 expresses its warmest thanks and appreciation to Miss Mabel Vickers for her many years of service to SC22 and its predecessor committee, as convenor of WG 4-COBOL and of the former COBOL Experts Group, and to the cause of standardization generally, and extends to her its best wishes for a long and enjoyable retirement.

Resolution 143:   Appreciation - Mrs. Virginia Castor

ISO/IEC JTC1/SC22 accepts with regret the resignation of
Mrs. Virginia Castor as convenor of WG9 - Ada. SC22further
expresses its gratitude for the considerable contributions she
has made to the work of WG9.

Resolution 144:   ISO/IEC JTC1/SC22 Secretariat

ISO/IEC JTC1/SC22
    - acknowledges the intent of the Standards Council of Canada
to relinquish the SC22 Secretariat with effect from after the
October 1990 Advisory Group meeting, and

    - invites its member bodies to review the possibility of
assuming the SC22 Secretariat, and, if wishing to take on this
function, to contact the JTC1 and SC22 Secretariat to initiate
the necessary actions to ensure a smooth transfer of
responsibility.

Resolution 145:   SC22 Secretariat

ISO/IEC JTC1/SC22
    - expresses its thanks and admiration for the effective and
efficient way in which Mr. J. Côté has performed his duties as
SC22 Secretariat;
    - regrets the announcement by the Standards Council of
Canada to relinquish the SC22 Secretariat; and

    - requests Mr. François Genuys, on behalf of the committee,
to write to the Standards Council of Canada asking if they would
be willing to reconsider their decision.

Canada - abstain.

Resolution 146:   Appreciation - Mr. Robert Kearney

ISO/IEC JTC1/SC22 acknowledges with great regret the resignation
of its chairman, Mr. Robert Kearney, and records its warm thanks
for his hard work and dedication, and the wise guidance he has
given to this committee and its predecessor.

Resolution 147:   Appreciations - Berlin Meeting

ISO/IEC JTC1/SC22 expresses its appreciation to all those who
have assisted in the work of this meeting, in particular
    (a) DIN, for providing facilities for the HoD/C meeting,
         and secretariat support

(b)   Members of the staff of DIN, with special reference to

- Mr. Klaus-Peter Schulz, for his kind welcome and for word processing services beyond the call of duty;

- Mr. Michael Kutschke for the many services he performed, not least in connection with the guided tour and conference dinner;

- Ms. Bärbel Kuppermann for her assistance to the drafting committee with word processing, photocopying and other secretarial services;

(c)   Siemens AG for providing facilities for the plenary meeting and ad hoc meetings, and their staff who helped to provide those facilities

(d)   Those who sponsored the guided tour and conference dinner, namely
        CGK Computer Gesellschaft Konstanz mbH
        Hoesch AG
        Interface Computer GmbH
        Siemens AG
        City Council of Berlin (West)

(e)   Mr. François Genuys, for performing the exacting task of acting chairman of SC22, in the unavoidable absence of Mr. Kearney, with efficiency, and with unfailing charm and patience despite occasional provocation;

(f)   Mr. Joseph Côté for his usual efficient role as the SC22 Secretariat, which we have come to take for granted but we regret we may not be able to enjoy for more than one further year.

(g)   the drafting committee (Mr. John Hill, Mr. Isak Korn, Mr. Bertrand Leroy, Mr. Brian Meek and Mr. Gerhard Schmitt) for the outstanding quality of their work, with special reference to Isak Korn for his efficient leadership and to Brian Meek for his excellent document editing.

With applause.

Resolutions 98 - 110, 112 - 144 and 146 - 148 were unanimously approved. Japan abstained on Resolution 111 and Canada abstained on Resolution 145.