Report of ISO/IEC FCD 1989 ballot resolution meeting and WG4 Meeting 22, 5-8 November 2001

Meeting dates: 5 – 8 November 2001

Location: Embassy Suites
Tropicana Ballroom 2
4315 Swenson Street
Las Vegas, Nevada 89118, USA

Convener: Ann Bennett
IBM J63/F34, 555 Bailey Avenue
San Jose, CA 95141-1099   USA
email: nwallace@us.ibm.com

1.   Opening of WG4 meeting.   Ms Ann Bennett, convener, called WG4 meeting 22 to order at 0900 hours Pacific Standard Time on Monday, 5 November, 2001, in Las Vegas, Nevada. This was a co-located meeting with the NCITS J4 COBOL Technical Committee meeting 234. At this co-located meeting, J4 met before and after the WG4 meeting.

2.   Opening Business

2.1   Introduction of Delegates.   The delegates from each country were introduced. The following is the list of delegates in attendance for all or part of the meeting, along with their affiliation if any (those marked with an asterisk participated by teleconference):

Germany:	Mr. Othmar Augustin, GOI
Japan:	*Mr. Wataru Takagi, Hitachi, Ltd.
	*Mr. Tomohiko Inoue, NEC
	*Mr. Kazuhiko Noba, Fujitsu Limited
The Netherlands:	Mr. Wim Ebbinkhuijsen
New Zealand:	Ms Jeanette Nutsford, Interex
	Mr. Kenneth Nutsford, Interex
U.K.:	Mr. Rod Grealish, BCS
	Ms Jeanette Nutsford, Interex
	*Mr. Brian Murray Watts, De Montfort University
U.S.A.:	Mr. Bruce Hobbs, Wizard Systems
	Mr Thane Hubbell, Fujitsu
	Mr. Robert A. Karlin, Karlin's Korner
	Mr. Donald F. Nelson, Compaq Computer Corporation
	Mr. Don A. Schricker, Micro Focus
	Mr. Charles C. Stevens, Unisys
	Mr. Barry Tauber, Victor Consulting

Note: Because of the difficulties associated with travel following the events of September 11, teleconferencing was made available to appointed delegates.

All the SC22 "P" members that submitted comments on the FCD ballot were represented either in person or by teleconference. The Swedish national body was not represented.

2.2   Introductory remarks by convener.   Ms Bennett stated that the major purpose of the meeting was to resolve FCD letter ballot comments. She noted that there was a negative vote from Sweden. Five national bodies submitted comments with YES votes: Germany, Japan, UK, The Netherlands, and USA.

2.3   Welcome by host, local arrangements.   Mr. Robert A. Karlin, Karlin's Korner, greeted the delegates and presented administrative details about the meeting and its environment.

2.4   Appointment of secretary and chair.   Ms Bennett chaired a major part of the meeting and appointed Mr. Robert Karlin and Mr. Barry Tauber as co-chairs for the remainder of the meeting. Mr. Charles C. Stevens was appointed secretary.

2.5   Selection of drafting committee.   Mr. Grealish, Mr. Schricker, Mr. Ebbinkhuijsen, and Mr. Karlin volunteered to serve on the drafting committee. Ms Bennett asked Mr. Grealish to chair this committee.

2.6   Recognition of documents.   Documents discussed during the meeting are identified in the final agenda, Attachment 1 to these minutes.
> {Note: Temporary documents are numbered LV-nnnn where nnnn corresponds to a J4 document number. For example, LV-0715 and J4/01-0715 correspond and reference the same document. J4 documents are available at http://people.ne.mediaone.net/doncobol/index.html. Temporary documents are working documents or supporting documents that are of WG4 use only during the meeting.}

2.7   Approval of the agenda.   Ms Bennett distributed an updated agenda, which was further modified in discussion. The modified agenda was approved by consensus and is attached to these minutes as attachment 1, Final Agenda.

2.8   Approval of minutes of meeting 21, Newbury, Berkshire, UK, May 2000.
The minutes of Meeting 21 were approved without change.

3.   JTC1 or SC22 information affecting the group
The SC22 plenary was held September 18-20, 2001. Because of the events in New York on 11 September, some delegates and conveners could not attend the meeting, so teleconferencing was arranged. Ms Bennett participated by telephone for presentation of the WG4 convener's report and discussion of WG20 issues.

Ms Bennett pointed out that SC22 must officially disband a working group if there is no additional development work envisioned; there are no procedures for a working group to operate in maintenance mode.

Because of disparate views on whether WG20 should continue to exist, an SC22 letter ballot will be conducted to determine the future of WG20. Options are to disband WG20 (with SC22 character handling addressed by an ad-hoc group within SC22) or to continue WG20.

4.   Liaison Reports
4.1   WG20. Ms Bennett reported that WG20 has recently revised Annex A of TR 10176, which contains the recommended letters for programming language identifiers. WG20 proposes to revise the recommended letters for identifiers frequently as new characters are added to the UCS. They are proposing that the list of characters not be in the published TR, that instead the TR contain a pointer to a data base that is frequently updated. This may not provide a stable reference for normative referencing in the COBOL standard. WG4 needs to consider having a fixed list of recommended letters in the COBOL standard.

4.2   NCITS/J4. Mr. Schricker reported that reaffirmation of the current ANSI COBOL standard and its amendments has been completed by NCITS and ANSI, after considerable J4 effort in handling public comment. J4 has been working on development of recommended responses to FCD ballot comments for consideration by WG4 during FCD ballot resolution. Work is in progress on the Finalizer technical report.

5.   Preliminary discussion of future meetings.
Initial WG4 consensus is that the next WG4 meeting should be tentatively scheduled for the August-September 2002 timeframe. The next SC22 plenary meeting is scheduled for 26-30 August 2002 in Saariselka, Finland; care must be taken to avoid conflict with this meeting.

6.   ISO/IEC FCD 1989 Ballot Resolution
6.1   Remaining work.   Mr. Schricker distributed an extract of the co-located J4 meeting agenda listing FCD ballot comments for which J4 had not completed the recommended responses or the development of associated changes. These included:

- Japan 1, regarding upper-to-lower case foldings in DTR 14652
- Sweden 4b, regarding the definition of character
- US 38, regarding synchronization of the implementor-defined and undefined-element lists with the text.
- Japan 3, regarding an inconsistency of alphabet-name for coded character sets
- Japan 7 and 8, regarding inconsistencies in locale identification
- Sweden 1 and US 3, regarding the clarification of year on normative references
- Germany 10, regarding clarifications of parameters passed by reference
- Germany 13, regarding clarifications of the SIZE ERROR phrase
and miscellaneous corrections associated with US 41.

Unless raised for discussion in this meeting, WG4 expects that J4 will complete this work using the J4 recommended direction.

6.2   Prioritize and assess comments
   SC22 N 3239, Summary of voting on SC 22 N 3204
   SC22 N 3243, Late comments from Sweden on SC 22 N 3204
   WG4 N 0150, Draft recommendations for response to FCD comments
WG4 N 0150 reproduces all comments submitted on the FCD ballot and contains input from J4.

J4 had analyzed the FCD comments and prepared recommendations for a response along with any proposed changes to the document. WG4 agreed that the approach to ballot resolution would be to identify the comments, recommended responses, or proposed changes in WG4 N 0150 that any participant wanted to discuss or revise. There was WG4 consensus that J4's recommended responses were satisfactory unless raised for discussion. Most of J4's recommended responses or directions and associated changes were available in WG4 N 0148 for review before the meeting. J4 had made updates in the co-located J4 meeting preceding this WG4 meeting, and these were identified in WG4 N 0150. The convener allocated meeting time for participants to review the J4 updates.

The following ballot comments were identified for discussion:
- Germany 5, 10, and 14
- Japan 1
- Netherlands 3, 7, 8
- US 7, 29
- Sweden 1a, 1I, 1j, 3, 4b, 4f, and 5b
- The UK general comment
These were added to the agenda at 6.3.

6.3   Review selected responses
   WG4 N 0150 (J4/01-0725), Draft recommendations for response to FCD Comments
The following actions were taken on comments that WG4 chose to review:
a) Germany 5: The comment requested that specific data alignment requirements be imposed. J4 recommended that these changes not be made because such sweeping changes would incompatibly impact existing data; J4 proposed changes regarding data alignment only for strongly-typed items. WG4 consensus was to accept J4's recommendation for the response and the proposed changes to strongly-typed items.

b) Germany 10: The comment pointed out an undefined situation in syntax rule 18 of the INVOKE statement, which states that an argument is both a sending and receiving item. It is unclear how the length is to be calculated. J4 recommended that the INVOKE statement be modified to clarify the rules consistently with a similar rule for the CALL statement. WG4 consensus was to accept J4's recommendation and the associated changes.

c) Germany 14: The comment proposes an exception condition for the ACCEPT statement when no data is transferred. J4 noted that the rules are identical to those in ISO/IEC 1989:1985 and that some implementations allow zero-length data transfers; therefore, J4 recommended that the draft not be changed.

WG4 agreed, but thought that the response was not worded properly to express the reasoning. Mr. Stevens prepared a refined response, which was accepted by WG4.

d) Japan 1: The comment stated that DTR 14652:2001, Information technology -- Specification methods for Cultural Conventions should not be referenced for specification of upper to lower-case correspondence for identifiers. The request was that the folding be implementor-defined. In subsequent discussions within J4, Japan proposed that the case mappings from DTR 14652 be added to the COBOL standard as a normative annex, and that DTR 14652 continue to be normatively referenced; J4 agreed and recommended that WG4 accept this approach. Mr. Imajo and Mr. Takagi had prepared proposed text for the annex, which was presented in LV-0714. There was WG4 consensus to accept this resolution of the comment. The proposed text for the annex (LV-0714) was reviewed at agenda item 6.4.

It became apparent that a similar action was needed for the text of Annex A of TR 10176, which lists recommended letters for identifiers. This is especially important because a fixed set of letters is needed until the COBOL standard is again revised. Ms Bennett will prepare the text for a normative annex to include the list from TR 10176:2001.

e) Netherlands 3: The comment requested that a rule be added to clarify the handling of zero-length items in the VALIDATE statement. Mr. Hubbell conferred with Mr. Piggott, who stated his opinion that no new rule is necessary. WG4 was concerned with the case of zero-length for an item described with ANY LENGTH. There was WG4 consensus to add a syntax rule to prohibit use of an item with ANY LENGTH in the VALIDATE statement.

f) Netherlands 7: The comment stated that the example of validation in the concepts was incorrect in stating that the input record being validated is unchanged. WG4 noted that the example is correct in that regard, and the related rule appears under the DEFAULT clause. The rules of the VALIDATE statement itself were not clear about this. Mr. Schricker will prepare changes clarifying the VALIDATE rules. The response as recommended by J4 will be updated to reflect WG4's response.

g) Netherlands 8: The comment requested that the GO TO statement be made archaic. J4 recommended against this. There was WG4 consensus that GO TO not be made archaic, but that the proposed wording of the response needed to be refined. Mr. Stevens developed revised wording as follows, which WG4 accepted:

The GO TO statement can be used in well-structured ways that actually reduce errors -- branching to a common exit from inner nests, for example. Experience has shown that attempts by maintenance programmers to remove GO TOs proved to be significant sources of error during Y2K remediation. GO TO can be used in error-prone ways, but so can many other features of the language.

h) US 7: The comment requested that the definition and use of strongly-typed items be clarified, and provided specific recommendations for corrections. Mr. Hubbell prepared a response and detailed changes to address the concerns. WG4 accepted the response and the associated changes with minor editing.

i) US 29: The comment requested the addition of a note to explain the intent that standard arithmetic allow an implementor to provide upward compatibility for native arithmetic, in the absence of rules to the contrary. J4 recommended against this and had drafted a response. WG4 agreed that a note should not be added, but thought that the wording of the response seemed contradictory. The response was modified to indicate that no appropriate way was found to introduce such a note and that WG4 did not consider this an essential change.

j) Sweden 1a: The comment stated that there is no reason to reference ISO/IEC 646. J4 had prepared a response explaining that it is necessary to reference ISO/IEC 646 for compatibility with the previous COBOL standard. WG4 accepted J4's recommended response with minor editing.

k) Sweden 1i and 1j: These comments asked that WG4 reference and use LIA-1 and LIA-2. WG4 had discussed this in the past and deferred it for future consideration. Most of COBOL's arithmetic specification

existed in the previous edition of the standard and cannot be incompatibly changed. The recommended response from J4 reflected this and there was WG4 consensus to accept the response unchanged.

l) Sweden 3: This comment asked for alternative syntax for existing COBOL operators and relation conditions (for example, DOT OPERATOR for *). J4 had prepared a recommendation against this, but suggested that the response indicate the syntax would be considered for a future standard. WG4 accepted the recommendation against adding the alternate syntax but did not want to imply that it would be included in a future standard. The response was modified to remove that implication and accepted by WG4.

m) Sweden 4b: Regarding two definitions that include the word "numeral", the comment points out that a numeral is not the same as a digit. WG4 changed "numeral" to "digit". This will be reflected in the response.

n) Sweden 4f: The comment objects that the COBOL draft uses the term "character" to refer to elements of traditional character sets and "national character" to refer to elements of a large character set such as ISO/IEC 10646; requests transcoding of constants to Unicode UTF-16; and requests escapes to represent characters that cannot be expressed in the character encoding used for program source. J4 recommended a draft response indicating that
   - In practice, many existing COBOL applications rely on the distinction between these two character data types in the language.
   - Two features are provided to represent characters than cannot be expressed in the encoding of the source text.
   - Special handling of UTF-16 will be considered for a future standard, ideally using a common direction for SC22 programming languages.
   WG4 accepted the recommended response with minor editing.

o) Sweden 5b: The comment questioned the handling together of the concepts of character set and collating sequence. J4 drafted a response indicating that the concepts were tied together in previous editions of the standard and incompatibilities would be introduced by changing it now. New features added for cultural conventions separate these concepts. WG4 agreed and accepted the recommended response with minor editing.

p) UK General Comment: The comment stated that the UK would wish to see a much shorter timescale for the preparation of a standard following the revision in progress and that it will be at least 17 years between the previous COBOL standard and this one. The following points were noted in discussion:
   - After publication of the 1985 revision of COBOL, WG4 set out to revise the standard by amendment rather than publication of a new edition. Two such amendments were published, with the last in 1993.
   - In June of 1992, WG4 set out to produce a new edition with limited high priority enhancements.
   - At two subsequent review cycles (an informal working draft review and the CD ballot), WG4 added substantial additional features in response to comments.
   - Though still too long, it has taken 10 years to produce the new edition rather than 17.
   Discussion ensued of the need to look into new methods and tools for future work and to more tightly define the scope of work. There was consensus that the intent is to introduce new features in a more timely manner, whether by revision or amendment. The topic was further discussed at agenda item 10.

6.4   Review selected changes.
         LV-0715 (J4/01-0715), Project editor change proposal (PECP) # 7
         LV-0716 (J4/01-0715), Combined pending change proposal (CPCP) # 3
LV-0715 and LV-0716 were presented for WG4 review. These documents contained detailed errata that J4 had developed for implementing recommended responses, for those responses that J4 considered non-controversial. WG4 identified specific changes and pending J4 change proposals for review during this meeting.

a) LV-0714 (J4/01-0714), Annex containing the content of DTR 14652. This document was prepared by Mr. Imajo to resolve FCD comment Japan 1. It incorporates the case foldings of DTR 14652 into a COBOL

Annex. WG4 requested minor changes in presentation and reached consensus that the annex be included. Mr. Takagi is preparing the update for final review in J4.

b) Miscellaneous changes related to US 41
   - LV-0695 (J4/01-0695), Editing of floating-point items. There are some ambiguities with regard to zero suppression and floating insertion for the significand part of a floating-point edited item. There was WG4 consensus to disallow these editing cases to avoid any yet unknown ambiguities. Mr. Ebbinkhuijsen will prepare a change proposal for processing by J4 for inclusion in the Project Editor Change Proposal.
   - LV-0685 (J4/01-0684), DECIMAL-POINT IS COMMA and locale. The draft erroneously allows DECIMAL-POINT IS COMMA for items that are edited by a locale. This was not intended. Mr. Ebbinkhuijsen will prepare a change proposal for processing by J4 to correct SPECIAL-NAMES general rule 14 to delineate clearly between picture editing and locale editing.
   - LV-0718 (J4/01-0718), RESUME after compound statements. There is a need to state the precedence between the rules for resuming at next statement after an exception and the rules of OPEN, which state that an OPEN specifying multiple files is treated as though separate OPEN statements had been written. This applies to other statements that are treated as a series of statements. WG4 directed that the rules be updated to give precedence to the rules of individual statements and to ensure that the rules of each such statement are clear. Mr. Schricker will prepare a change proposal for processing by J4.
   - LV-0721 (J4/01-0721), CALL-CONVENTION example. An example is needed in the concepts to illustrate the use of the CALL-CONVENTION directive and the ENTRY CONVENTION clause of the OPTIONS paragraph. Proposed text is presented in LV-0721. WG4 made minor modifications. There was consensus to accept the proposal as modified for incorporation by the J4 project editor in the Project Editor Change Proposal.

c) LV-0669 (J4/01-0669), References to ISO/IEC 10646-1 and –2. This relates to Sweden 1b, Sweden 1c, and US 3. Requests are (1) to reference the most recent additions to ISO/IEC 10646 and (2) to reference 10646-1 and -2 without a year. J4 recommended referencing these standards without a year so that future amendments and revisions are automatically referenced. LV-0669 presents the changes to accomplish this. WG4 removed a proposal item that revises text about UTF-16 (to be completed in a separate document) and accepted the changes for inclusion in the Project Editor Change Proposal. Ms Bennett will prepare a document that revises the text about UTF-16.

6.5   Finalize Comment Disposition.   There was consensus that the Disposition of Comments Report be finalized on the basis of WG4 N 0150 and the actions taken at this meeting. Resolution 1 was prepared to endorse the comment dispositions and subsequent processing of the revised draft as an FDIS.

7.   Defect Handling process for revised ISO/IEC 1989.   Ms Bennett briefed WG4 on SC22's defect handling process and said that a WG4 process is needed for handling defect reports on the forthcoming standard. Alternatives were to analyze defect reports within WG4 or within J4.

Ms Bennett and Mr. Schricker reported on how WG14 handles defect reports, as a possible model for WG4 adoption or as a source of practices that WG4 might assume. Topics for general discussion included defect handling methodology and the resources necessary to support the defect handling process. Ms Bennett prepared WG4 N 0151 containing her understanding of the WG4 consensus on this subject for further discussion later in the meeting. Japan reported its opinion that J4 has the resources and the knowledge to handle the development of responses as it has done in the past, and should continue in that role, and WG4 reached that consensus after considerable discussion. WG4 reached consensus on the process outlined in WG4 N 0151, and requested that J4 develop details for implementing the process. The drafting committee prepared resolution 3 to that effect.

The following outlines the essential elements:
- Defect reports are submitted by a national body to the convener.
- The convener will distribute them to J4 and WG4, with a request that J4 develop a response.
- WG4 members who want to participate in analysis will provide input to J4.

- J4 will develop a response and associated changes for a technical corrigendum (if any).
- The convener will poll WG4 on acceptance of the response and any associated changes.
- Accepted responses and changes will be bundled into a record of response and technical corrigendum.
- The convener will periodically forward records of response and technical corrigenda for SC22 ballot.
Resolution 4 was prepared to request WG4 to develop a web site for on-going reporting and tracking of defects.

8.   Finalizer technical report.   A draft is under construction by the project editor but was not sufficiently complete for discussion at the meeting. Mr. Hubbell will review Mr.Takagi's notes on Finalizer to determine whether he can assist and collaborate in the production of the technical report. Mr. Hubbell is backup project editor for the finalizer TR.

9.   Class library technical report.   WG4 discussed possible classes for the class library, in particular the following:
- Collections
- Data base support; ODBC support; commit/rollback, SQL
- Persistence
- Existing vendor class libraries as a model
- XML; mapping COBOL data descriptions into XML
- GUI
- Ideas presented to J4 by James Gavan (J4/01-0672)

Points of discussion were that the scope of work needs to be constrained so that GUI is outside it; collections and persistence must be within it; database is necessary to make it attractive to the market. There was consensus that the four major areas that need to be the focus of concentration are collections, persistence, XML manipulation, and data base access. Resolution 2 was drafted to give J4 direction in this area.

10.   Schedule and future plans.   WG4 discussed the directions that should be taken in future revisions. There was sentiment to focus on significant issues – those of high-visibility and high-marketability -- rather than tinkering with existing features. The units of work should be well-enough defined so that revisions of the standard can be produced more frequently and in a more timely manner in the future. Amendments could be considered as a vehicle for adding features.

10.1   Final editing of FDIS.   It may be necessary for a small group of volunteers to perform final editing before forwarding the FDIS for JTC1 ballot. Resolution 5 was prepared to give authority to the WG4 convener and the Project Editor to accomplish final editing.

10.2   Schedule for FDIS and IS.   At this point in the process, the FDIS is to be forwarded as soon as possible after the NCITS/J4 meeting in February; the remainder of the schedule is contingent on that.

10.3   Schedule and plans for Finalizer Technical Report.   SC22 is closely monitoring schedules. It may be necessary to submit a PDTR as soon as possible to get the input we need from the outside community; the second PDTR can refine the document. The following schedule, extracted from LV-0081 (J4/01-0081), is registered with SC22:

Stage 3, SC22 combined registration and PDTR ballot (3 months)		
	start	July 1, 2002
	close	October 1, 2002
Stage 3, second SC22 PDTR ballot (3 months)		
	start	April 1, 2003
	close	July 1, 2003
Stage 4, JTC1 DTR ballot (3 months): *{Content is final at this point}*		
	start	January 1, 2004
	close	April 1, 2004
Stage 5, TR to ITTF (within 2 months of DTR ballot close)		June 1, 2004

There was WG4 consensus that the schedule remain as it is for now.

10.4   Plans for Class Library Technical Report.   WG4 has no work item or schedule for this, but J4 was chartered with producing a preliminary report on the subject (resolution 2). The convener does not want to request a new work item or subdivision until there is a well-defined scope of work, so as to facilitate development of and adherence to an achievable schedule.

10.5   Future meetings.   Mr. Takagi presented Mr. Imajo's offer to host the next WG4 meeting in early-to-mid August, or possibly September, 2002, pending formal approval of an offer to the SC22 secretariat. Further details will be forthcoming.

WG4 discussed the impact of teleconferencing in the current meeting and its potential use in the future. Teleconferencing was made available to authorized delegates who could not attend this meeting, with a request from the convener that individuals wishing to teleconference coordinate with their head of delegation. There was prevailing sentiment that it is the responsibility of the head of a working group delegation to oversee and administer participation of their teleconferencing delegates. If an entire delegation is teleconferencing, it is the convener's responsibility to brief that delegation and coordinate their participation during the meeting.

WG4 is not in a position to cover teleconferencing costs; these costs need to be borne either by those delegations participating via teleconferencing or by third-party sponsors. Methods of teleconferencing without high costs should be explored for any future teleconferencing.

In the current extraordinary circumstances, teleconferencing was essential. The convener prefers that in normal circumstances the delegates attend the meetings in person. Communication is easier face-to-face, and arranging facilities for meetings is far more difficult when few members are in attendance. For the next WG4 meeting at which teleconferencing participation is used, the convener will develop a set of guidelines for teleconferencing, which will be discussed at the start of the meeting.

11.   Review and approval of resolutions from this meeting.   The following are the resolutions from the meeting, which are also reported in WG4 N 0160. All resolutions were approved unanimously.

Resolution 1-2001, Disposition of Comments and Forwarding of FDIS
> ISO/IEC JTC 1 SC 22/WG4 approves WG4 N 0152 as the response to the comments on ISO/IEC FCD 1989:2001 and requests NCITS/J4 to forward as soon as possible after the February J4 meeting the draft COBOL standard to the WG4 convener, and WG4 requests the convener to forward the draft to SC22 as soon as possible for processing as an FDIS.

Resolution 2-2001, Class Library Statement of Work
> ISO/IEC JTC 1 SC 22/WG4 requests NCITS/J4 to prepare, prior to the next meeting of WG4, a statement of work that includes scope and schedule for a class library consisting of collections, persistence, database access, and XML manipulation, for consideration by WG4. J4 shall provide an assessment of the complexity of standardizing these four areas.

Resolution 3-2001, Defect Handling
> ISO/IEC JTC 1 SC 22/WG4 endorses the defect handling process outlined in WG4 N 0151 and requests NCITS/J4 to develop J4 procedures for defect processing on the forthcoming ISO/IEC 1989 in line with the process outlined in that document.

Resolution 4-2001, Defect web site
> ISO/IEC JTC 1 SC 22/WG4 requests NCITS/J4 to establish and maintain a public web site to track the progress of responses to defect reports on the forthcoming ISO/IEC 1989.

Resolution 5-2001, Final Editing of FDIS
> ISO/IEC JTC 1 SC 22/WG4 requests that its convener and project editor do final editing to prepare ISO/IEC 1989 as an FDIS after the February 2002 J4 meeting and prior to forwarding the document for balloting.
> > Approved unanimously.

12. Close of the meeting.   With resolutions having been approved and scheduled time for the meeting having expired, the chair declared the meeting adjourned at 1802 hours PST, Thursday, 8 November 2001.

_____ End of report _____

Attachment 1

Final Agenda
ISO/IEC JTC1/SC22/WG4 - COBOL
ISO/IEC FCD 1989 Ballot Resolution Meeting
WG4 meeting 22,   5 - 8 November 2001

1.   Opening of the meeting: 9:00 am, Monday, 5 November 2001
2.   Opening business
2.1   Introduction of delegates
2.2   Introductory remarks by convener
2.3   Welcome by host, local arrangements
2.4   Appointment of secretary and chair
2.5   Selection of drafting committee
2.6   Recognition of documents
2.7   Approval of agenda
2.8   Approval of Minutes of Meeting 22, May 2000 (WG4 N 0143)
3.   JTC1 or SC22 information affecting the group
4.   Liaison reports
4.1   WG20 (Ms Bennett)
4.2   NCITS/J4 (Mr. Schricker)
5.   Preliminary discussion of future meetings
6.   ISO/IEC FCD 1989 Ballot Resolution
6.1   Remaining J4 work
6.2   Prioritize and assess comments
                    SC22 N 3239, Summary of voting on SC22 N 3204
                    SC22 N 3243, Late comments from Sweden on SC22 N 3204
                    WG4 N 0150, Draft recommendations for FCD responses
6.3   Review selected responses
                    WG4 N 0150 - Draft recommended responses
6.4   Review selected changes
                    LV-0715, Project editor change proposal
                    LV-0716, Combined pending change proposal
                    LV-0714, Annex for DTR 14652 case mappings
                    LV-0695, Editing of floating-point items
                    LV-0685, DECIMAL-POINT IS COMMA and locale
                    LV-0718, RESUME after compound statements
                    LV-0721, CALL-CONVENTION example
                    LV-0669, References to ISO/IEC 10646-1 and -2
6.5   Finalize Comment Disposition
7.   Defect Handling process for revised ISO/IEC 1989 (WG4 N 0151)
8.   Finalizer Technical Report
                    LV-0081, Finalizer TR schedule
9.   Class Library Technical Report
10.   Schedule and future plans
10.1   Final editing of FDIS
10.2   Schedule for FDIS and IS
10.3   Schedule and plans for Finalizer Technical Report
10.4   Plans for Class Library Technical Report
10.5   Future meetings
11.   Review and approval of resolutions from this meeting
12.   Close of the meeting: end of day 8 November 2001