

# Minutes for Joint Meeting of ISO/IEC JTC1/SC22/WG5 and PL22.3 Meeting 216

Document No. PL22.3-2018-00xxx-PL22.3 minutes for m216

Document Date: 6/25/2018  
Reply To: [Dan Nagle](#)  
Subject: Draft Minutes of Joint Meeting of ISO/IEC JTC1/SC22/WG5 and INCITS PL22.3 Working group for Fortran June 11-15, 2018 (9:00AM – 6:00PM Pacific), In-person

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## 0. Notes:

The minutes reflect both the WG5 and PL22.3 portions, and will be marked accordingly.  
WG5 papers are referenced as Nnnnn.  
PL22.3 papers are referenced as 18-*nnn*.

## 1. Administrative business

- 1.1 Call to Order Monday June 11, 2018 Dan Nagle  
After the call to order, the session was turned over to WG5

## 2. WG5: Opening Business

- 2.1 Introductory remarks from the WG5 Convenor Steve Lionel  
The convenor welcomed participants, especially those who were attending WG5 for the first time. He noted that this was his first meeting as WG5 convenor.
- 2.2 Welcome from the Host Brian Friesen  
Brian welcomed participants on behalf of Lawrence Berkeley Laboratory.
- 2.3 Local arrangements Brian Friesen/Damian Rouson  
Brian described local arrangements including action to be taken in the event of an earthquake. Damian described the social arrangements for the week and local possibilities for dinner.
- 2.4 Appointments for this meeting  
The drafting committee would be Reinhold Bader, Daniel Chen, David Muxworthy (chair), Dan Nagle and Masayuki Takata. David would act as secretary and Steve Lionel as librarian and as editor of the Disposition of Comments document in response to the DIS ballot.
- 2.5 Adoption of the [N2150] agenda  
The agenda was adopted

## 3. WG5: Matters arising from the Minutes of the Garching 2017 meeting [N2132]

There were no items not otherwise on the agenda

## 4. WG5: Status of Garching 2017 resolutions [N2131]

No matters were raised

## 5. WG5 Reports

- 5.1 *SC22 Matters* Steve Lionel  
 The convenor reported that SC22 continued to disallow line numbers in standards documents. An SC22 working party had recommended a more timely procedure to distribute corrections and updates to existing standards via a JTC1 website.

There was some concern about a possible delay in the provision of the Summary of Voting in the SC22 DIS ballot, but in fact the document (SC22N5273) appeared on the SC22 website on the first morning of the meeting and was copied for convenience to paper 18-168.

- 5.2 *National Activity Reports*  
**Canada:** The quarterly SCC meeting was held in March with representatives of other programming language working groups such as C, C++, COBOL and ADA. The Fortran 2018 DIS was approved.

**Germany:** Reinhold Bader is a member of DIN NA 043-01-22 AA "programming languages" subcommittee and participated in the yearly meeting, held in Berlin on November 27, 2017. He gave a talk about the state of Fortran standardization. Nine of the 17 registered members were present at the meeting.

**Japan:** The chair of ITSCJ/SC22/Fortran WG has been changed from Minoru Tanaka (Fujitsu) to Hidetoshi Iwashita (Fujitsu). Translation of F2008 had been abandoned and that of F2018 would officially start, at the earliest, in April 2019. Preparation for the 2019 Tokyo meeting was in progress, and the preliminary local arrangements (N2151) would soon be available.

**UK:** The BSI Fortran panel had 19 members, including observers, having gained four new members and lost three during the year. The UK voted "approval with comments" on the Fortran 2015/2018 second CD and DIS. The UK voted in favour of Steve Lionel as WG5 convenor.

**USA:** The US had collected comments and requirements for future developments from around the world. It was considering criteria for the next revision, again open to world-wide contributions. Steve Lionel had taken over as WG5 convenor and established new WG5 (and PL22.3) websites.

- 5.3 *Report from Primary Development Body (INCITS/PL22.3 Chair)*  
 PL22.3 was charged with developing the draft standard and had done so.

- 5.4 *Reports from other Development Bodies (Editors/Heads)*  
 there were no contributing development bodies at present.

- 5.5 *Liaison Reports*  
 Liaison reports are captured in the PL22.3 section below.

## 6 **WG5: Meeting Participants:**

Steve Lionel	WG5 Convenor
Dan Nagle	NCAR, for USA PL22.3 Chair
Reinhold Bader	Leibniz Supercomputing Centre, for Germany and DIN
Kiran Chandramohan	ARM, for UK
Daniel Chen	IBM, for Canada
Tom Clune	NASA, for USA
Malcolm Cohen	PL22.3
Bob Corbett	PL22.3
Salvatore Filippone	Cranfield University, for UK
Brian Friesen	LBNL, for USA
Gary Klimowicz	NVIDIA, for USA
Bill Long	Cray, for USA
Divya Mangudi	Intel, for USA
Jeanne Martin	Former convenor, Monday only
Lorri Menard	Intel for USA
David Muxworthy	British Standards Institution, for UK
Vipul Parekh	Resenex, visitor Tuesday to Thursday
Craig Rasmussen	DOE

Soren Rasmussen	Cranfield University, for UK
John Reid	JKR Associates, for UK
Larry Rolison	visitor, Monday only
Damian Rouson	Sourcery
Anton Shterenlikht	PL22.3
Nathan Sircombe	ARM, for UK
Van Snyder	JPL, for USA
Masayuki Takata	Edogawa University, for Japan

Meeting was turned back to INCITS/PL22.3 at 09:54

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## 2. Agenda

### 1. Monday, June 11, 2018 9:45 am

#### 1.1 Opening business

D. Nagle

##### **Remarks from the chair**

D. Nagle

Vote for document to provide Stan Whitlock with emeritus status, 18-157r1  
Motion made by Clune/seconded by Snyder, with Unanimous Consent (UC)

##### **Adoption of agenda**

D. Nagle

Motion made by Clune/seconded Snyder to adopt the agenda, and  
unanimous consent (UC)

##### **Approval of Meeting 215 minutes**

D. Nagle

Motion made by Shterenlikht/seconded Long to approve the m215 minutes -  
UC

##### **WG23 report (if any)**

D. Nagle

WG23 is meeting every-other-month. The group has an actively updated  
draft.

##### **J11 Liaison report (if any)**

D. Nagle

Work is proceeding as usual. CPLEX has been included in the main standard.

##### **MPI Liaison report (if any)**

B. Long

MPI Forum is meeting THIS WEEK - June 11-14

<https://www.mpi-forum.org/meetings/2018/06/agenda>

The tickets concerning persistent collective operations are up for a formal vote. Looks like this is going to make it this time. There is some progress on MPI Sessions. Sessions is a very large topic – they are making slow progress on different pieces for now. There is some talk about reviving ULFM by splitting it some manner.

Also note that gfortran intends to use OpenCoarrays as soon as MPI agrees on fault tolerance

##### **OpenMP Liaison report (if any)**

B. Long

The OpenMP committee will release a comment draft for the OpenMP 5.0 specification (TR7) in early July, which will cover all the new features that will be in the final specification. They have

been working on voting in final features and fixes to the specification in the last three months, in preparation of that draft. Final OpenMP 5.0 release is scheduled for November this year.

Here is a list of the major new features since the last draft release:

- What was called the "concurrent" construct in TR6 has been renamed to the "loop" construct. It works similar to "acc loop independent" in OpenACC. It may be used in place of a distribute, worksharing-loop, or simd construct, and allows an implementation more flexibility in parallelization since it implies that the iterations of the loop are independent. Related to this, an order(concurrent) clause was added to distribute, worksharing-loop, and simd constructs to give more flexibility to the implementation on parallelization of the associated loops.
- Improved lambda support when executing code on a target device.
- Allow some flavors of non-rectangular loops to be parallelized.
- A scan directive was added to support inclusive/exclusive scan (prefix sum) computations in a parallelizable loop.
- A modifier was added to the reduction clause to define task reductions.
- Support "reverse offload" from a target device back to the host (e.g. to do I/O or other things that a target device may not support).
- Permit the teams construct to be used outside of a target construct, on the host.
- API routines for defining task dependence objects.
- To allow external asynchronous activities to interact with OpenMP synchronization primitives, a clause was added to allow an OpenMP task to stay live (in a "detached" state) beyond the completion of its structured block. The clause accepts a pointer to an `omp_event_t` object, and an API routine was added to satisfy that event, permitting the task to complete (and any OpenMP synchronization constructs waiting on the task's completion).
- Context-based selection of function variants or directive variants. A directive was added for declaring function variants for functions called in an OpenMP program. The compiler may replace the call to a function with a call to its variant if it appears in a specified enclosing context. A meta-directive was added for specifying different directive variants that may be selected from according to the enclosing context. Context may be defined according to the enclosing OpenMP constructs, traits for the current device, or other implementation-specific traits.
- Non-contiguous array sections may now appear in a target update directive (e.g. update an array with a non-unit stride that resides in a target device). The array section syntax for C/C++ was updated to support a triplet notation.
- The base pointer used in an array section may now be shaped with a new "pointer shaping" syntax.
- New memory allocator traits were added for pinned memory and for specifying fallback behavior in case an allocation cannot be satisfied.
- Derived type variables with allocable components can now appear in a map clause. Deep-copy semantic is implied.

***UPC/PGAS Liaison report (if any)***

B. Friesen/D.  
Rouson

Nothing new to add.

***OpenACC Liaison report (if any)***

G. Klimowicz

Information about OpenACC, including the current standard document, training materials, and upcoming events can be found at <http://www.openacc.org/>.

The current OpenACC 2.6 standard includes support for manual deep copy of data structures to target processors. Discussions have begun on "true" deep copy, which allows data movement policies to be defined within the data types themselves, and referenced when needed in the accelerated code. Users can specify which parts of larger data structures are to be copied to targets. There is a technical report <https://www.openacc.org/sites/default/files/inline-files/TR-16-1.pdf> that describes the "true" deep copy requirements, beginning in Section 3.

There are over 110 applications in production or development using OpenACC, including:

- Gaussian 16
- ANSYS Fluent
- VASP
- MPAS-A
- COSMO
- GAMERA for GPU
- Quantum Espresso

There are several "hackathons" coming up, where researchers bring their codes to work alongside with OpenACC experts to accelerate their applications. Event dates are posted at <https://www.openacc.org/events>.

- September 10-14 NCSA
- September 17-21 Brookhaven
- October 1-5 CSCS
- October 22-26 OLCF

**Flang OpenSource report: Gary Klimowicz**

The goal is to build an LLVM-based Fortran compiler. Last years' compiler is working on three target architectures. Embarking on a rewrite of the frontend to be consistent with LLVM. The parser is complete, working on semantics, and it will be Open-Sourced.

**IFIP/WG2.5 Liaison report Van Snyder**

No change in any of the WG2.5 projects.

**WG9 (Ada) Van Snyder**

Ada has published a corrigendum. It has a list of fiftyish things to consider for next meeting. ISO is considering a way for committees to publish corrigenda on their websites.

**Beginning Treasurer's report**

J. Steidel

Ended last meeting with \$2313.20; no changes since then, so starting this meeting with \$2313.20

There is no meeting fee for the joint WG5/PL22.3 meeting.

**Beginning membership report**

L. Menard

13 member organizations, 12 represented here.

Total Membership at beginning of Meeting 215 : 13

Majority [1 over half] : 7

Quorum [1/3 of voting members, min 4 present] : 4

This meeting was the first for Oak Ridge National Labs, but their representative

was unable to attend.

As this was a joint meeting with WG5, several members of WG5 were also in attendance; some of whom are also PL22.3 members. Please see the full list of attendees at the end of this document.

### **Local arrangements**

D. Nagle

Brian reports that there are three rooms available each day for subgroups. Damian noted that tickets are still available for the Wednesday night dinner.

### **Comments from members**

## 1.2 Tutorials (if needed)

Steve presented the new web site, including how to upload papers.

## 1.3 Subgroup organization

D. Nagle

**/JoR / IO / Intrinsic:** Dan Nagle (head), Steve Lionel, David Muxworthy, Lorri Menard, Makki Takata, Kiran Chandramohan

**/Data:** Malcolm Cohen (Head), Van Snyder, Bob Corbett, Tom Clune, Craig Rasmussen, Gary Klimowicz, Divya Mangudi

**/HPC:** Bill Long (head), Anton Shterenlikht, Daniel Chen, Brian Friesen, John Reid, Damian Rouson, Salvatori Filippone, Nathan Sircombe, Reinhold Bader

**/EDIT:** Malcolm Cohen

There is no /INTERP business this meeting.

Adjourned to subgroup meetings at 10:30.

## 1.4 Subgroup meetings

## 1.5 Subgroup reports (4:30 pm)

### **/JoR**

For vote tomorrow:

18-181 "Ballot Comment GB26"

18-182 "Ballot Comment GB27"

18-183 "Ballot Comment GB029"

18-186 "Trailing blanks in a hexadecimal-significand input field"

18-187 "Argument DIM of THIS\_IMAGE"

No action on

18-160r1 "Allowing real and imaginary zero arguments to LOG(X)" at this meeting because it is a new feature request. To be considered later.

### **/Data**

For vote tomorrow:

18-106 (from last meeting) "Constants and intrinsic functions"

18-169 "Response to US-039, US-040, US-041"

Note, this has a technical change, needs a straw vote

18-170 "Response to GB-003 and GB-038"

18-172 "Response to DE-008"

18-174 "Response to DE-009"

18-178 "Response to DE-009"

18-185 "Response to GB-020" which has a straw vote

## **/HPC**

For vote tomorrow:

18-171 "Ballot Comment GB083"

18-175 "Ballot Comment GB042"

18-176 "Ballot Comment GB048"

18-177 "Ballot Comment GB049"

18-179 "Ballot Comments GB061 and GB062"

18-184 "Ballot Comment JP066"

For discussion tomorrow

18-180 "Ballot Comment JP066"

Adjourned at 4:45

## 2. Tuesday, June 12, 2018 9:00 am

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### 2.1 F2015 Plenary (13-010)

### Subgroup Heads

#### **/JoR:**

\*\* motion: 18-181 "Ballot Comment GB26" [Nagle](Menard/Klimowicz) UC

\*\* motion: 18-182 "Ballot Comment GB27" [Nagle](Menard/Klimowicz) UC

\*\* motion: 18-183 "Ballot Comment GB029" [Nagle](Menard/Lionel) UC

\*\* motion: 18-186 "Trailing blanks in a hexadecimal- significant input field" [Takata](Lionel/Corbett) UC

-- motion: 18-187 "Argument DIM of THIS\_IMAGE" [Chandramohan](Clune/CRasmussen)

Withdrawn; come back with a repaired paper

#### **/Data:**

\*\* motion: 18-106 "Constants and intrinsic functions" [Long](Cohen/? )UC

\*\* motion: 18-169 "Response to US-039, US-040, US-041" [Cohen] (Cohen/Long) UC

\*\* motion: 18-170 "Response to GB-003 and GB-038" [Cohen] (Cohen/Snyder) UC

\*\* motion: 18-172 "Response to DE-008" [Cohen](Cohen/Clune) UC

\*\* motion: 18-174 "Response to DE-009" [Cohen](Cohen/Snyder) UC

\*\* motion: 18-178 "Response to DE-009" [Cohen](Cohen/CRasmussen) UC

\*\* motion: 18-185 "Response to GB-020" [Cohen](Cohen/Clune) UC

what will compiler do with something of rank>max?

with a straw vote: Accept | Reject | Undecided

16 0 5

**/HPC:**

- \*\* motion: 18-171 "Ballot Comment GB083" [Long](Long/Chen)UC
- \*\* motion: 18-175 "Ballot Comment GB042" [Long](Long/Chen)  
As amended UC
- \*\* motion: 18-176 "Ballot Comment GB048" [Long](Long/?)UC
- \*\* motion: 18-177 "Ballot Comment GB049" [Long](Long/Chen)UC
- \*\* motion: 18-179 "Ballot Comments GB061 and GB062" [Long](Long/Chen)  
As amended UC
- \*\* motion: 18-184 "Ballot Comment JP066" [Long](Long/?)UC

For discussion: 18-180 "Ballot Comment JP066" [Bader]  
Generally like the plan; needs to be cleaned up

Recess to subgroup at 10:00

[2.2 Tutorials \(if needed\)](#)

[2.3 Subgroup meetings](#)

[2.4 Subgroup reports \(4:30 pm\)](#)

*Turned over to WG5 when reconvened.*

Steve noted that 18-156 contains the list of recommended features from the last meeting of PL22.3, and is encouraging the non-US members of WG5 to have their countries put together their own list of features within 6 months. At the Tokyo meeting we will have a firm list of new features for the next revision, even without details.

*Back to PL22.3 at 4:40.*

**/JoR:** For vote tomorrow:

- 18-888 "Output of negative zero"
- 18-206 "Argument DIM of THIS\_IMAGE"
- 18-207 "Ballot comment GB036"
- 18-209 "Response to comments GB035 and GB037"
- There will be a straw vote on 18-205 "Discussion of GB043 (RANDOM\_INIT)"

**/Data:** For vote tomorrow:

- 18-159r1 "C\_LOC needs to permit an assumed-type argument"
- 18-162r1 "Recursive elemental functions"
- 18-189 "Country comment GB-050"
- 18-190 "Country comment GB-051"
- 18-191 "Country comment GB-052"
- 18-195 "Country comments GB-053 and GB-054"
- 18-196 "Country comments GB-055"
- 18-197 "Another mistake about inquiry functions in Clause 17"
- 18-198 "Country comment GB-069"
- 18-208 "Country comment JP070"
- 18-204 "Country comment JP072"



**/HPC:** For vote tomorrow:

18-180r1 "Ballot Comment JP 023 and JP 024"  
18-199 "Ballot Comments DE046 and GB047"  
18-200 "Ballot Comment GB057"  
18-201 "Response to JP025"  
18-202 "Ballot Comment GP059"  
18-203 "Response to JP060 and JP064"  
18-210 Ballot Comment GB056"  
18-211 "Ballot Comment GB058"

**/EDIT:** For vote tomorrow

18-121r1 "Typos: "to to", "the the""  
18-166 "clarifying constraint C926"  
18-192 "Country comment GB-021"  
18-193 "Country comment GB-063"  
18-194 "Country comment JP-071"

There is still one more paper to write, and the secretariat comments to address

Recessed at 5:00.

### 3. Wednesday, June 13, 2018 9:00 am

#### 3.1 F2015 Plenary (13-010)

#### Subgroup Heads

Note: Unless otherwise marked, straw vote results are listed as YES / NO / (no opinion)

**/JoR:**

\*\* motion: 18-188 "Output of negative zero" [Muxworthy](Menard/Clune)UC  
\*\* motion: 18-206 "Argument DIM of THIS\_IMAGE" [Chandramohan](Menard/Clune)UC  
\*\* motion: 18-207 "Ballot comment GB036" [Menard](Clune/Menard) UC  
\*\* motion: 18-209 "Response to comments GB035 and GB037" [Menard] (Menard/Lionel) UC  
Straw vote on 18-205 "Discussion of GB043 (RANDOM\_INIT)" [Lionel]

**/Data:**

\*\* motion: 18-159r1 "C\_LOC needs to permit an assumed-type argument" [Long&Cohen](Cohen/Clune)  
As amended UC  
\*\* motion: 18-162r1 "Recursive elemental functions" [Bader&Cohen] (Cohen/CRasmussen) UC  
\*\* motion: 18-189 "Country comment GB-050" [Cohen] (Cohen/Long) UC  
\*\* motion: 18-190 "Country comment GB-051" [Cohen] (Cohen/CRasmussen) UC  
\*\* motion: 18-191 "Country comment GB-052" [Cohen] (Cohen/Clune) UC  
\*\* motion: 18-195 "Country comments GB-053 and GB-054" [Cohen] (Cohen/Menard) UC  
\*\* motion: 18-196 "Country comments GB-055" [Cohen] (Cohen/Snyder) UC  
\*\* motion: 18-197 "Another mistake about inquiry functions in Clause 17" [Snyder] (Cohen/Snyder) UC  
\*\* motion: 18-198 "Country comment GB-069" [Cohen] (Cohen/Snyder) UC

\*\* motion: 18-208 "Country comment JP070" [Cohen] (Cohen/CRasmussen) UC

Straw vote: 18-204 "Country comment JP072" [Cohen]

Do we do the technical change or not?

DO	DON'T DO	UNDECIDED
13	0	5

**/HPC:**

\*\* motion: 18-180r1 "Ballot Comment JP 023 and JP 024" [Bader] (Long/Cohen) UC

\*\* motion: 18-199 "Ballot Comments DE046 and GB047" [Shterenlikht&Bader] (Long/Cohen) UC

\*\* motion: 18-200 "Ballot Comment GB057" [Long] (Long/Lionel) UC

\*\* motion: 18-201 "Response to JP025" [Reid] (Long/Chen) UC

\*\* motion: 18-202 "Ballot Comment GP059" [Long] (Long/Clune) UC

\*\* motion: 18-203 "Response to JP060 and JP064" [Reid] (Long/Klimowicz) UC

-- motion: 18-210 "Ballot Comment GB056" [Long&Chen] (Clune/Conen)

After a long discussion, withdrawn, and reassigned to DATA

\*\* motion: 18-211 "Ballot Comment GB058" [Long] (Long/Lionel) UC

**/EDIT:**

\*\* motion: 18-121r1 "Typos: "to to", "the the"" [Shterenlikht] (Cohen/Long) UC

\*\* motion: 18-166 "clarifying constraint C926" [Corbett] (Cohen/Corbett)

As amended UC

\*\* motion: 18-192 "Country comment GB-021" [Cohen] (Cohen/Long) UC

\*\* motion: 18-193 "Country comment GB-063" [Cohen] (Cohen/Long) UC

\*\* motion: 18-194 "Country comment JP-071" [Cohen] (Cohen/CRasmussen) UC

Recessed to subgroup 10:15

[3.2 Tutorials \(if needed\)](#)

[3.3 Subgroup meetings](#)

[3.4 Subgroup reports \(4:30 pm\)](#)

**/JoR:**

For vote tomorrow:

18-205r1 "Response to DIS comments GB043, 044, 045 (RANDOM\_INIT)"

**/Data:**

For vote tomorrow:

18-204r1 "Country comment JP072"

18-210r1 "Ballot Comment GB056"

18-225 "Wrong terminology"

18-226 "Another mistake in an example"

**/HPC**

No papers

**/Edit**

For vote tomorrow

18-212r1 "fixing text concerning declarations"

18-213 "Comment \*\* 001"

18-214 "Comment \*\* 002"

18-215 "Comment \*\* 006"

18-216 "Comment \*\* 073"

18-217 "Comment \*\* 074"

18-218 "Comment \*\* 075"

18-219 "Comment \*\* 076"

18-220 "Comment \*\* 077"

18-221 "Comment \*\* 078"

18-222 "Comment \*\* 079"

18-223 "Comment \*\* 080"

18-224 "Comment \*\* 084"

Comments: John Reid will be giving a seminar at 2:00.

Dinner tonight is at 6:00 at Lake Chalet. This is about a 35 minute drive from the facility.

Recessed until tomorrow at 4:45

## 4. Thursday, June 14, 2018 8:00 am

### 4.1 F2015 Plenary (13-010)

### Subgroup Heads

**/JoR**

-- motion: 18-205R1 "Response to DIS comments GB043, 044, 045 (RANDOM\_INIT)"  
[Lionel&Nagle&Reid] (Lionel/Menard) withdrawn for more work.

**/Data**

\*\* motion: 18-204r1 "Country comment JP072" [Cohen](Cohen/Snyder) UC

\*\* motion: 18-210r1 "Ballot Comment GB056" [Long&Chen&Cohen] (Cohen/Clune)

Motion to use "alternative". As amended, UC (there will be a post)

\*\* motion: 18-225 "Wrong terminology" [Cohen] (Cohen/Mangudi) UC

\*\* motion: 18-226 "Another mistake in an example" [Cohen] (Cohen/Snyder) UC

**/HPC**

no papers

**/EDIT**

\*\* motion: 18-212r1 "fixing text concerning declarations"[Corbett](Cohen/Corbett) 9 (for) -2 (against)  
motion passed.

\*\* motion: 18-213 "Comment \*\* 001" [Cohen](Cohen/Clune) UC

\*\* motion: 18-214 "Comment \*\* 002" [Cohen](Cohen/Clune) UC

\*\* motion: 18-215 "Comment \*\* 006" [Cohen](Cohen/Klimowicz)

if anyone wants to do a look-thru please review the pdf. UC

\*\* motion: 18-216 "Comment \*\* 073" [Cohen](Cohen/Chen) UC

\*\* motion: 18-217 "Comment \*\* 074" [Cohen](Cohen/Snyder) UC

\*\* motion: 18-218 "Comment \*\* 075" [Cohen](Cohen/Menard) Please future-proof. UC

\*\* motion: 18-219 "Comment \*\* 076" [Cohen](Cohen/Long) UC

\*\* motion: 18-220 "Comment \*\* 077" [Cohen](Cohen/Clune)

will need to check references to notes, and use advised mechanism.

As amended; UC

\*\* motion: 18-221 "Comment \*\* 078" [Cohen](Cohen/Snyder) UC

\*\* motion: 18-222 "Comment \*\* 079" [Cohen](Cohen/Clune) UC

\*\* motion: 18-223 "Comment \*\* 080" [Cohen](Cohen/Clune) UC

\*\* motion: 18-224 "Comment \*\* 084" [Cohen](Cohen/Clune) UC

## 4.2 Tutorials (if needed)

## 4.3 Subgroup meetings

## 4.5 Subgroup reports (4:30 pm)

### **/JoR**

For vote tomorrow: 18-205r2 "Response to DIS comments GB043, 044, 045 (RANDOM\_INIT)"

### **/DATA**

For vote tomorrow

18-230 "Sequence association poorly described"

18-231 "Ancient relic unearthed"

### **/Edit**

**For vote tonight**

\*\* Motion: 18-227r1 [Sircombe] (Cohen/Long) UC

\*\* Motion: 18-229 [Cohen] (Cohen/Clune) As amended UC

### **PL22.3 Business:**

\*\* Motion 18-228 "IEEE 754 Liaison Charge "[Nagle] (Cohen/Klimowicz)

Document 18-228 contains a charge to appoint Robert Corbett as the liaison between J3 and the IEEE/SA standards committee for floating point arithmetic. Motion was made by Cohen/seconded by Klimowicz; during discussion it was noted we should change "J3" to "PL22.3", and the motion passed with Unanimous Consent.

Recess until tomorrow AM at 5:00PM.

5. Friday, February 16, 2018 8:00 am

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5.1 F2015 Plenary (13-010)

Subgroup Heads

**/JoR**

\*\* Motion 18-205r2 "Response to DIS comments GB043, 044, 045 (RANDOM\_INIT)"  
[Lionel&Nagle&Reid] (Lionel/Clune) As amended UC

**/DATA**

\*\* Motion 18-230 "Sequence association poorly described" [Cohen] (Cohen/Snyder) UC  
\*\* Motion 18-231 "Ancient relic unearthed" [Cohen] (Cohen/Snyder)  
As amended UC

**/Edit**

\*\* Motion 18-215r1 "Comment \*\* 006" [Cohen] (Cohen/Long) UC

**/HPC**

No business

5.2 Closing business

5.3 Review of action items (if any)

Lorri to submit two requests to INCITS: The request to grant Stan Whitlock Emeritus status, and the request to make Robert Corbett the IEEE Liaison.

5.4 Future meetings

D. Nagle

*2018 Meeting dates:*

Oct 15-19, 2018 m217  
Fairfield Inn, Las Vegas  
Host: Dan Nagle

*2019 Meeting dates:*

Feb 11-15, 2019 m218  
Fairfield Inn, Las Vegas  
Host: tbd

Aug 5-9, 2019 m219  
Joint meeting with WG5  
Tokyo, Japan

Oct 14-18, 2019 m220  
Fairfield Inn, Las Vegas  
Host: tbd

## 5.5 Treasurer's report

J. Steidel

Motion to reinstate the \$50 meeting fee for meeting 217 (Clune/Corbett) UC  
Balance is unchanged

## 5.6 Closing membership report

L. Menard

13 member organizations, 12 represented here.  
Total Membership at end of Meeting 216 : 13

## 5.7 Comments from members

The editor noted that we passed 66 papers with edits for the standard, and has requested that other members doublecheck that we hit them all.

An enthusiastic thank you to the hosts for the use of the facility, and for providing snacks and lunch.  
PL22.3 /m216 adjourned at 9:45, and the meeting returned to WG5.

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## 7. **WG5: Decide whether the comments from the DIS ballot require construction of a separate FDIS, or whether the FDIS step can be skipped.**

There having been over 80 comments on the DIS, many of them generating multiple edits to the document, it was clear that an FDIS would be needed. The Project Editor was to incorporate the amendments made at the meeting and to make the draft FDIS available to WG5 members. It was anticipated that this would be done by July 7. In particular a subgroup consisting of Steve Lionel, Bill Long, Dan Nagle and John Reid was delegated to check the document for correctness. Other members were welcome to contribute.

## 8. **WG5: Consider the Fortran defect report**

Agenda item 8 was not pursued at this meeting

## 9. **WG5 Business and Strategic Plans**

### 9.1 **Goals for 2018-2021**

A draft Strategic Plan (N2154) was approved. Members were asked to comment on a draft Business Plan and Convener's Report for 2017-2018 which would be labelled N2156.

## 10. **Start planning for the further revision of the Fortran standard**

It was noted that most input to the survey on future development of the standard had come from the USA and other countries were encouraged to make contributions.

There followed a series of straw votes on topics highlighted in N2147.

Unless otherwise marked, all straw vote results are of the form: For – Against – No Opinion

- whether generics should be considered

straw vote: 14 - 4 – 3

- whether exceptions should be considered

straw vote: 7 - 5 - 9

The following items from N2147 had been left undecided in the review in 18-156.

- += and \*= syntax  
straw vote: 3 - 11 - 5
  - constructors for derived types  
straw vote: 1 - 8 - 12
  - allow a specification section in some constructs without block/endblock  
straw vote: 4 - 8 - 7
  - allow arrays in allocatables with coarray components  
straw vote: 8 - 5 - 7
- 

## **11. Future WG5 Meetings**

### **11.1 Future meetings**

Makki Takata, host for the 2019 meeting, asked for an indication of the size of hotel rooms that members might prefer. A straw vote went: spacious (and more expensive) 5 - smaller 8 - either 3.

Bill Long offered a meeting in Minneapolis, supported by Cray, and described facilities. Van Snyder offered a meeting in Pasadena and also described local facilities. A straw vote went:

Minneapolis 11 - Pasadena 2 - either 6. The Minneapolis invitation was accepted.

Nathan Sircombe offered a meeting in Manchester, UK, in 2021, supported by Arm. He gave a short presentation on Arm, local facilities, and the city of Manchester. The invitation was accepted.

### **12. Adoption of Resolutions [N2152]**

There was some discussion and minor editing of the draft proposed by the Drafting Committee. After editing, resolutions B1 to B3 and B9 to B11 were approved by unanimous acclaim and resolutions B4 to B8 were approved by unanimous consent

### **13. Adjournment**

Members congratulated Steve Lionel for successfully chairing his first meeting as WG5 convenor.

**WG5 Meeting adjourned 12:50 AM**

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Detailed PL22.3 Membership Roster

Company	First Name	Participant Class	Membership Class	In Attendance
Corbett	Robert Corbett	Principal	Voting	YES
Cray Inc	Bill Long	Principal	Voting	YES
IBM Corporation	Daniel Chen	Principal	Voting	YES
	Kelvin Li	Alternate	Voting	
	Rafik Zurob	Alternate	Voting	
Intel Corporation	Raghu Maddhipatla	Alternate	Voting	
	Divya Mangudi	Alternate	Voting	yes
	Lorri Menard	Principal	Voting	YES
	Jon Steidel	Alternate	Voting	
Jet Propulsion Laboratory	Van Snyder	Principal	Voting	YES
Kernelyze LLC	Thomas Knox	Principal	Voting	
	Anton Shterenlikht	Alternate	Voting	YES
Lawrence Berkeley National Laboratory	Bryce Adelstein-Lelbach	Principal	Voting	
	Brian Friesen	Alternate	Voting	YES
Lionel	Steve Lionel	Principal	Voting	YES
NASA	Thomas Clune	Principal	Voting	YES
	Henry Jin	Alternate	Voting	
National Center for Atmospheric Research (NCAR)	Dan Nagle	Principal	Voting	YES
	John Reid	Alternate	Voting	yes
	John Wallin	Alternate	Voting	
NVidia Corporation	Gary Klimowicz	Principal	Voting	YES
	Mark LeAir	Alternate	Voting	
Oak Ridge National Labs	David E. Bernholdt	Principal	Prospective	
United States Dept of Energy	Aleksandar Donev	Alternate	Voting	
	Karla Morris	Principal	Voting	
	Damian Rouson	Alternate	Voting	YES
	Craig Rasmussen	Alternate	Voting	yes