Form 4: New Work Item Proposal

<table>
<thead>
<tr>
<th>Circulation date:</th>
<th>Reference number: ISO/IEC NP TS 21938-1 (to be given by Central Secretariat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016-08-19</td>
<td>ISO/IEC JTC 1/SC 22</td>
</tr>
<tr>
<td>Closing date for voting:</td>
<td>N 5149</td>
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<tr>
<td>2016-11-12</td>
<td></td>
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<tr>
<td>Proposer</td>
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<tr>
<td>(e.g. ISO member body or A liaison organization)</td>
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<tr>
<td>ISO/IEC JTC 1/SC 22</td>
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<td>Secretariat</td>
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<td>ANSI</td>
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</table>

A proposal for a new work item within the scope of an existing committee shall be submitted to the secretariat of that committee with a copy to the Central Secretariat and, in the case of a subcommittee, a copy to the secretariat of the parent technical committee. Proposals not within the scope of an existing committee shall be submitted to the secretariat of the ISO Technical Management Board.

The proposer of a new work item may be a member body of ISO, the secretariat itself, another technical committee or subcommittee, an organization in liaison, the Technical Management Board or one of the advisory groups, or the Secretary-General.

The proposal will be circulated to the P-members of the technical committee or subcommittee for voting, and to the O-members for information.

- The proposer has considered the guidance given in the Annex C during the preparation of the NWIP.

**Proposal** (to be completed by the proposer)
Title of the proposed deliverable.

English title:


French title:

(In the case of an amendment, revision or a new part of an existing document, show the reference number and current title)

Scope of the proposed deliverable.

A Technical Specification in multiple Parts, specifying extensions to the programming language C. Each Part will specify extensions for a different aspect of parallel programming

Purpose and justification of the proposal*

Current vendor support for parallel programming in C is not universally available, and when it is available, methods of accessing that support are different for different vendors. This Technical Specification will unify the form and interpretation of parallel language extensions for C, to allow users to write portable code. It is expected that the Technical Specification, or parts of it, will be incorporated into a future International Standard after experience is gained with the Technical Specification in the marketplace.

Consider the following: Is there a verified market need for the proposal? What problem does this standard solve? What value will the document bring to end-users? See Annex C of the ISO/IEC Directives part 1 for more information. See the following guidance on justification statements on ISO Connect: https://connect.iso.org/pages/viewpage.action?pageId=27590861

Preparatory work  (at a minimum an outline should be included with the proposal)

- A draft is attached
- An outline is attached
- An existing document to serve as initial basis

The proposer or the proposer's organization is prepared to undertake the preparatory work required:

- Yes
- No

If a draft is attached to this proposal:

Please select from one of the following options (note that if no option is selected, the default will be the first option):

- Draft document will be registered as new project in the committee's work programme (stage 20.00)
- Draft document can be registered as a Working Draft (WD – stage 20.20)
- Draft document can be registered as a Committee Draft (CD – stage 30.00)
- Draft document can be registered as a Draft International Standard (DIS – stage 40.00)

Is this a Management Systems Standard (MSS)?

- Yes
- No

NOTE: if Yes, the NWIP along with the Justification study (see Annex SL of the Consolidated ISO Supplement) must be sent to the MSS Task Force secretariat (tmb@iso.org) for approval before the NWIP ballot can be launched.
Indication(s) of the preferred type to be produced under the proposal.

- [ ] International Standard
- [x] Technical Specification
- [ ] Publicly Available Specification
- [ ] Technical Report

**Proposed development track**

- [ ] 1 (24 months)
- [x] 2 (36 months - default)
- [ ] 3 (48 months)

**Note:** Good project management is essential to meeting deadlines. A committee may be granted only one extension of up to 9 months for the total project duration (to be approved by the ISO/TMB).

**Known patented items (see ISO/IEC Directives, Part 1 for important guidance)**

- [ ] Yes
- [x] No

If “Yes”, provide full information as annex

**Co-ordination of work:** To the best of your knowledge, has this or a similar proposal been submitted to another standards development organization?

- [ ] Yes
- [x] No

If “Yes”, please specify which one(s):

A statement from the proposer as to how the proposed work may relate to or impact on existing work, especially existing ISO and IEC deliverables. The proposer should explain how the work differs from apparently similar work, or explain how duplication and conflict will be minimized.

Impact will be limited to the C programming language. However, since many other language compilers and runtime systems are implemented in C, the benefits will be available to implementers of other languages. Backwards compatibility will be maintained, so that preexisting code will not be affected.

**A listing of relevant existing documents at the international, regional and national levels.**

ISO/IEC 9899:2011 Information technology – Programming languages – C

Please fill out the relevant parts of the table below to identify relevant affected stakeholder categories and how they will each benefit from or be impacted by the proposed deliverable(s).

<table>
<thead>
<tr>
<th>Stakeholder Category</th>
<th>Benefits/impacts</th>
<th>Examples of organizations / companies to be contacted</th>
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</thead>
<tbody>
<tr>
<td>Industry and commerce large industry</td>
<td>Unified support for parallelism</td>
<td></td>
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<tr>
<td>Industry and commerce SMEs</td>
<td>Unified support for parallelism</td>
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<tr>
<td>Government</td>
<td>Unified support for parallelism</td>
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<tr>
<td>Consumers</td>
<td>Unified support for parallelism</td>
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<tr>
<td>Labour</td>
<td>Unified support for parallelism</td>
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<tr>
<td>Academic and research bodies</td>
<td>Unified support for parallelism</td>
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<tr>
<td>Standards application businesses</td>
<td>Unified support for parallelism</td>
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<tr>
<td>Non-governmental organizations</td>
<td>Unified support for parallelism</td>
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<tr>
<td>Other (please specify)</td>
<td>Unified support for parallelism</td>
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</tbody>
</table>

**Liaisons:**  
A listing of relevant external international organizations or internal parties (other ISO and/or IEC committees) to be engaged as liaisons in the development of the deliverable(s).

**Joint/parallel work:**  
Possible joint/parallel work with:  
- ☐ IEC (please specify committee ID)  
- ☐ CEN (please specify committee ID)  
- ☐ Other (please specify)

A listing of relevant countries which are not already P-members of the committee.

Note: The committee secretary shall distribute this NWIP to the countries listed above to see if they wish to participate in this work

**Proposed Project Leader** (name and e-mail address)  
Clark Nelson  
clark.nelson@intel.com

**Name of the Proposer**  
Include contact information  
JTC 1/SC 22/WG 14  
dmk@dmk.com

This proposal will be developed by:  
- □ A new Working Group:  
(Note: establishment of a new WG must be approved by committee resolution)  
- □ The TC/SC directly  
- □ To be determined:

**Supplementary information relating to the proposal**  
- ☒ This proposal relates to a new ISO document  
- □ This proposal relates to the adoption as an active project of an item currently registered as a Preliminary Work Item  
- □ This proposal relates to the re-establishment of a cancelled project as an active project  

Other:
<table>
<thead>
<tr>
<th>Annex(es) are included with this proposal (give details)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Draft attached</td>
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<tr>
<td><strong>Additional information/question(s)</strong></td>
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