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Programming Languages — Technical Specification for C++ Extensions for Concurrency

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National foreword

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Foreword

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The committee responsible for this document is ISO/IEC JTC1.

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Programming Languages — Technical Specification for C++ Extensions for Concurrency

1 General [general]

1.1 Namespaces, headers, and modifications to standard classes [general.namespaces]

Since the extensions described in this technical specification are experimental and not part of the C++ standard library, they should not be declared directly within namespace `std`. Unless otherwise specified, all components described in this technical specification either:

— modify an existing interface in the C++ Standard Library in-place,
— are declared in a namespace whose name appends `::experimental::concurrency_v1` to a namespace defined in the C++ Standard Library, such as `std`, or
— are declared in a subnamespace of a namespace described in the previous bullet, whose name is not the same as an existing subnamespace of namespace `std`.

Each header described in this technical specification shall import the contents of `std::experimental::concurrency_v1` into `std::experimental` as if by

```
namespace std {
  namespace experimental {
    inline namespace concurrency_v1 {}
  }
}
```

Unless otherwise specified, references to other entities described in this technical specification are assumed to be qualified with `std::experimental::concurrency_v1::`, and references to entities described in the standard are assumed to be qualified with `std::`.

Extensions that are expected to eventually be added to an existing header `<meow>` are provided inside the `<experimental/meow>` header, which shall include the standard contents of `<meow>` as if by

```
#include <meow>
```

New headers are also provided in the `<experimental/>` directory, but without such an `#include`.

Table 1 — C++ library headers

`<experimental/future>`	`<experimental/barrier>`
`<experimental/latch>`	`<experimental/atomic>`

1.2 Future plans (Informative) [general.plans]

This section describes tentative plans for future versions of this technical specification and plans for moving content into future versions of the C++ Standard.

The C++ committee intends to release a new version of this technical specification approximately every year, containing the library extensions we hope to add to a near-future version of the C++ Standard. Future versions will define their contents in `std::experimental::concurrency_v2`, `std::experimental::concurrency_v3`, etc., with the most recent implemented version inlined into `std::experimental`.

When an extension defined in this or a future version of this technical specification represents enough existing practice, it will be moved into the next version of the C++ Standard by removing the `experimental::concurrency_v`*N* segment of its namespace and by removing the `experimental/` prefix from its header's path.

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