Unstable-Funcons-beta: Unstable-Funcons-Index

The PLanCompS Project

`Unstable-Funcons-beta/Unstable-Funcons-Index/Unstable-Funcons-Index.cbs`*

Unstable Funcons, for use only in Unstable Languages

Computations

Normal computation

Value indexing

```
[ Entity value-index
  Funcon initialise-index
  Funcon allocate-index
  Funcon lookup-index ]
```

Memos

```
[ Entity memo-map
  Funcon initialise-memos
  Funcon memo-value
  Funcon initialise-memo-value
  Funcon memo-value-recall ]
```

Abnormal computation

Postponing

```
[ Entity postponing
  Funcon postpone
  Funcon postpone-after-effect
  Funcon after-effect ]
```

*Suggestions for improvement: `plancomps@gmail.com`.
Issues: `https://github.com/plancomps/CBS-beta/issues`.

Threads

Multithreading

```
[ Datatype thread-ids
  Datatype threads
    Funcon thread-joinable
    Funcon thread-detached ]
```

Initialisation

```
[ Funcon initialise-multithreading ]
```

Activation

```
[ Funcon multithread
  Funcon thread-activate
  Funcon thread-detach ]
```

Execution

```
[ Funcon current-thread
  Funcon thread-atomic
  Funcon thread-yield
  Funcon thread-spin
  Funcon thread-suspend
  Funcon thread-resume ]
```

Termination

```
[ Funcon thread-terminate
  Funcon is-thread-terminated
  Funcon thread-value
  Funcon thread-join
  Funcon thread-exterminate ]
```

Scheduling

```
[ Funcon update-thread-stepping
  Funcon update-thread-schedule
  Funcon current-thread-schedule
  Funcon is-thread-preemptible
  Funcon thread-preemptible
  Funcon thread-cooperative ]
```

Thread synchronisation

Syncs

```
[ Datatype syncs
    Funcon sync-create
    Funcon sync-feature
    Funcon is-sync-feature ]
```

Sync features

```
[ Datatype sync-features
    Funcon sync-waiting-list
    Funcon sync-held
    Funcon sync-holder
    Funcon sync-count
    Funcon sync-feature-create ]
```

Locks

```
[ Funcon is-exclusive-lock-holder ]
```

Spin locks

```
[ Funcon spin-lock-create
  Funcon spin-lock-sync
  Funcon spin-lock-release ]
```

Exclusive locks

```
[ Funcon exclusive-lock-create
  Funcon exclusive-lock-sync
  Funcon exclusive-lock-sync-else-wait
  Funcon exclusive-lock-release ]
```

Reentrant locks

```
[ Funcon reentrant-lock-create
  Funcon reentrant-lock-sync
  Funcon reentrant-lock-sync-else-wait
  Funcon reentrant-lock-release
  Funcon reentrant-lock-exit ]
```

Semaphores

```
[ Funcon semaphore-create
  Funcon semaphore-sync
  Funcon semaphore-sync-else-wait
  Funcon semaphore-release ]
```

Shared-exclusive locks

```
[ Funcon rw-lock-create
  Funcon rw-lock-sync-exclusive
  Funcon rw-lock-sync-shared
  Funcon rw-lock-sync-exclusive-else-wait
  Funcon rw-lock-sync-shared-else-wait
  Funcon rw-lock-release-exclusive
  Funcon rw-lock-release-shared ]
```

Notifications

Barriers

```
[ Funcon barrier-create
  Funcon barrier-sync
  Funcon barrier-sync-else-wait ]
```

Conditions

```
[ Funcon condition-create
  Funcon condition-wait
  Funcon condition-wait-with-lock
  Funcon condition-notify-all
  Funcon condition-notify-first ]
```

Rendezvous

```
[ Funcon rendezvous-create
  Funcon rendezvous-sync
  Funcon rendezvous-sync-else-wait ]
```