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Goals of this Talk

- What is Frysk ?
- How can you use Frysk ?
- What makes Frysk cool ?

What is Frysk ?

- Object oriented modeling of operating environment.
- Targeting large scale multi-threaded C++ applications.
- A set of tools.

How can you use Frysk ? (fhpd)

```
$ fhpd ./funit-hello
[0.0] Loaded executable file:
...
(fhpd) break main
breakpoint 0 deferred
(fhpd) run
...
(fhpd) Breakpoint 0 main 0x4004f6
List
...
(fhpd) where
...
```

How can you use Frysk ? (printing variables)

```
(fhpd) print argv
```

```
(char **) 0x7fffeef61558
```

```
(fhpd) print *argv
```

```
(char *) 0x7fffeef628f9 "[...]/funit-hello"
```

```
(fhpd) print **argv
```

```
Error: invalid expression at: *argv
```

```
(fhpd) print *argv+10
```

How can you use Frysk ? (Notes)

- Supports traditional debugging commands
- Supports C/C++ expressions

How can you use Frysk ? (inlining)

```
$ fhpd ./funit-stack-inlined
```

```
...
```

```
(fhpd) break third
```

```
breakpoint 0 deferred
```

```
(fhpd) run
```

```
...
```

```
(fhpd) Breakpoint 0 third 0x40049a
```

```
where
```

```
...
```

```
(fhpd) list
```

```
...
```

```
(fhpd) dump
```

```
Generating corefile 'core.2963' for process: 2963
```

How can you use Frysk ? (Notes)

- Handles inlining information

How can you use Frysk ? (core files)

```
$ fhpd ./core.2963 ./funit-stack-inlined
```

```
Attached to core file: core.2963
```

```
(fhpd) where
```

```
...
```

```
(fhpd) list
```

```
...
```

How can you use Frysk ? (core files 2)

```
$ fhpd 3115
```

```
Attached to process 3115
```

```
(fhpd) where
```

```
...
```

```
(fhpd) quit
```

```
$ fcore 3115
```

```
$ fdebuginfo core.3115
```

```
...
```

```
$ fdebugrpm core.3115
```

```
...
```

```
Do you wish to install the above packages? [y/n]: y
```

How can you use Frysk ? (core files 3)

```
$ fstack 3115
```

```
...
```

```
$ fstack core.3115
```

```
...
```

```
$ fhpd core.3115
```

```
Attached to core file: core.3115
```

```
(fhpd) where
```

```
...
```

```
(fhpd) focus
```

```
...
```

```
(fhpd) [0.0] where
```

```
...
```

How can you use Frysk ? (Notes)

- Extracts core files (selectively)
- Handles core files transparently

How can you use Frysk ? (ftrace)

```
$ ftrace -sys read 3115
```

```
...
```

```
$ ftrace -sym cairo_* 3115
```

```
...
```

How can you use Frysk ? (fcatch, ferror)

```
$ fcatch ./funit-3forks
```

```
...
```

```
$ ferror -e "fork3" ./funit-3forks
```

```
...
```

```
$ ferror -e "fork2" ./funit-3forks
```

```
...
```

```
$ ferror -e "fork*" ./funit-3forks
```

```
...
```

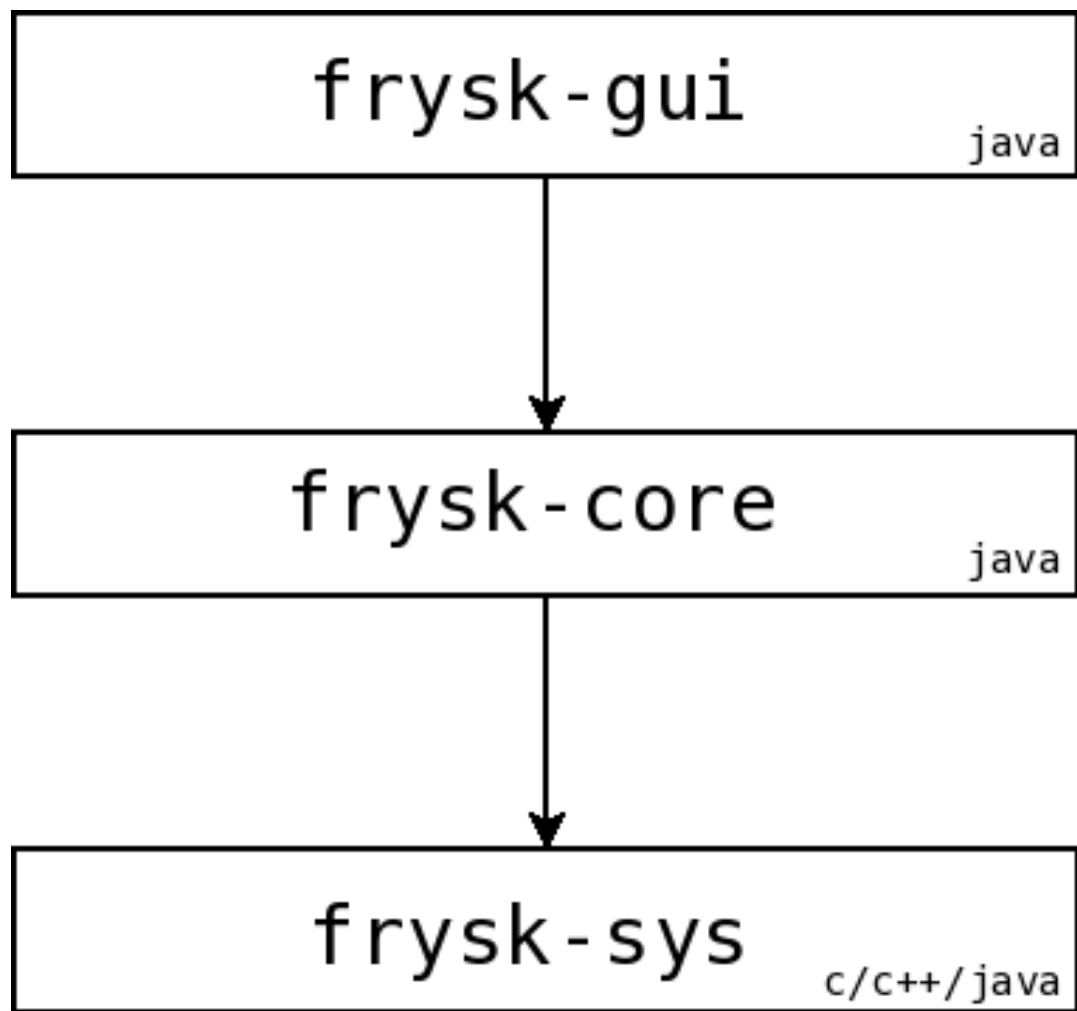
How can you use Frysk ? (Notes)

- Correctly models threads
- Transparently follows forks

How can you use Frysk ? (GUI)

- A client of the event driven core
- Currently under development

What makes Frysk cool ? (Architecture)



What makes Frysk cool ?

- Test driven development
- Easily extensible core
- Correct thread, and process model
- Pushes underlying technologies
- Human interaction

Further Information

- #frysk GimpNet
- <http://planet.fryskproject.org/>
- <http://sourceware.org/frysk/>
- frysk@sourceware.org
- Questions ?