



Demo 9:

AspeCt-oriented C (ACC)
for Systems Development with C

Wednesday 14th March 16:00-16:30

Friday 16th March 11:00-11:30



MIDDLEWARE SYSTEMS
RESEARCH GROUP

AspeCt-oriented C Features



aosd.07

6th International Conference on
Aspect-Oriented Software Development

Feature Subset	ACC	AspectJ
primitive pointcut: call, execution, cflow, args, ...	v ??	v
composite pointcut: &&, , !	v	v
named pointcut	v	v
advice: before, after, around, proceed()	v	v
context exposure: result() and args()	v	v
pointcut definition with wildcards	v	v
inter-type member declaration	v	v
set, get, handler, initialization, cflowbelow, ...	X	v
<i>callp() pointcut capture of calls via function pointer</i>	v	X
pointcut reflection: thisJoinPoint, ...	v	v
debugging support	v	v
<i>build adapter to build large projects with aspects</i>	v	v

Success Stories & Demo



- Weave tracing aspect into **GCC** 4.0.1.2
 - advise every function call of gcc
- Integrate **ACC** into existing builds of complex software systems
 - **ORBIT2** (GNOME IPC middleware)
 - **NUT/OS** (embedded real-time operating system)
- Case studies
 - **Red-black tree** product family from libavl tree library
 - use **ACC** for 3rd year introductory Operating Systems course assignments (add system calls, profiling etc.)

Come and See - Go and Get It - <http://www.aspectc.net>