



Fifth European Workshop on OpenMP

**EWOMP '03
Part II: OMPlab**

**Aachen, Germany
September 24-26, 2003**

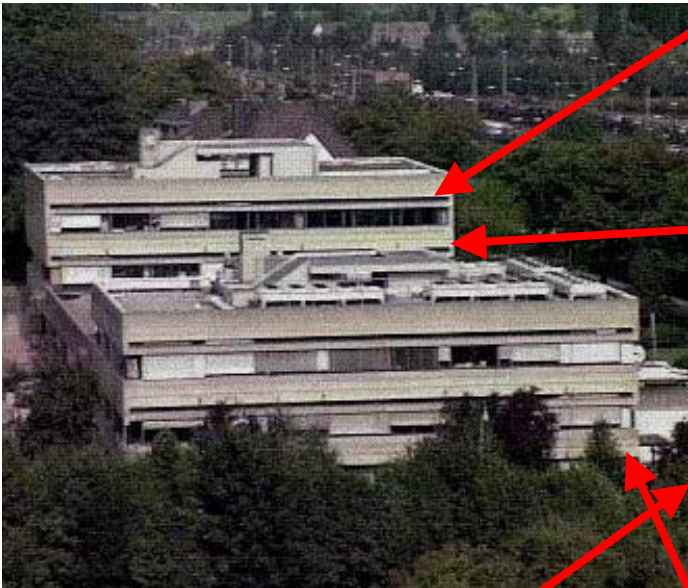
Some Directions in the Computing Center

3rd floor – upper side of the building
lecture room – registration
– coffee breaks – WLAN+LAN

2nd floor:
upper entrance – restrooms

1st floor:
Lab rooms, Internet access in CIP
WLAN + LAN

0th floor - lower side of the building:
main entrance



Taxis and shutte busses will leave in front of the main entrance

EWOMP '03 - Outline

	OMPtalks		OMPlabs		
	Mon 22	Tue 23	Wed 24	Thu 25	Fri 26
9:00	presentations	presentations	presentations	hands-on	hands-on
~10:30	<i>coffee break</i>	<i>coffee break</i>	<i>coffee break</i>	<i>coffee break</i>	<i>coffee break</i>
~11:00	presentations	presentations	presentations	plenum, hands-on	plenum, wrap-up
13:00	<i>lunch</i>	<i>lunch</i>	<i>lunch</i>	<i>lunch, museum</i>	<i>lunch</i>
14:30	presentations	presentations	presentations	hands-on	clean-up
~16:00	<i>coffee break</i>	<i>coffee break</i>	<i>coffee break</i>	<i>coffee break</i>	
16:30	presentations	panel	hands-on	plenum, hands-on	
~18:15	<i>end of day</i>	<i>end of day</i>	<i>end of day</i>	<i>end of day</i>	
	20:30 social dinner	19:30 Cathedral		20:00 social dinner	

EWOMP '03 Part II: OMPlab - Wed, Sept 24, 2003

8:30 *registration*

9:00 Tutorials / Presentations:
Programming Environments and Tools I – *chair: Dieter an Mey*

10:40 *coffee break*

11:10 Tutorials / Presentations:
Programming Environments and Tools II
– *chair: Matthijs van Waveren*

13:10 *lunch “Mensa Vita” - shuttle busses*

14:30 Presentations: Applications – *chair: Bernd Mohr*

15:50 *coffee break*

16:20 Hands-on

18:30 *end of day*

EWOMP '03 Part II: OMPlab - Thu, Sept 25, 2003

- 8:30** **Hands-on**
- 10:30 *coffee break*
- 11:00** **plenum: status reports**
- 11:xx** **Hands-on**
- 13:00 *lunch "Mensa Vita" – optional: computer museum*
- 15:00** **Hands-on**
- 15:30 *coffee break*
- 16:00** **plenum (if necessary)**
- 16:xx** **Hands-on**
- 18:00 *end of day*
- 20:00 *social dinner, restaurant "Kazan"*

EWOMP '03 Part II: OMPlab - Fri, Sept 26, 2003

- 8:30** **Hands-on**
- 10:30 *coffee break*
- 11:00** **plenum: status reports, final discussion, wrap-up**
- 13:00 *lunch "Mensa Vita"*
- 14:30** **Hands-on, "clean-up"**
- 15:30 *end of EWOMP'03*

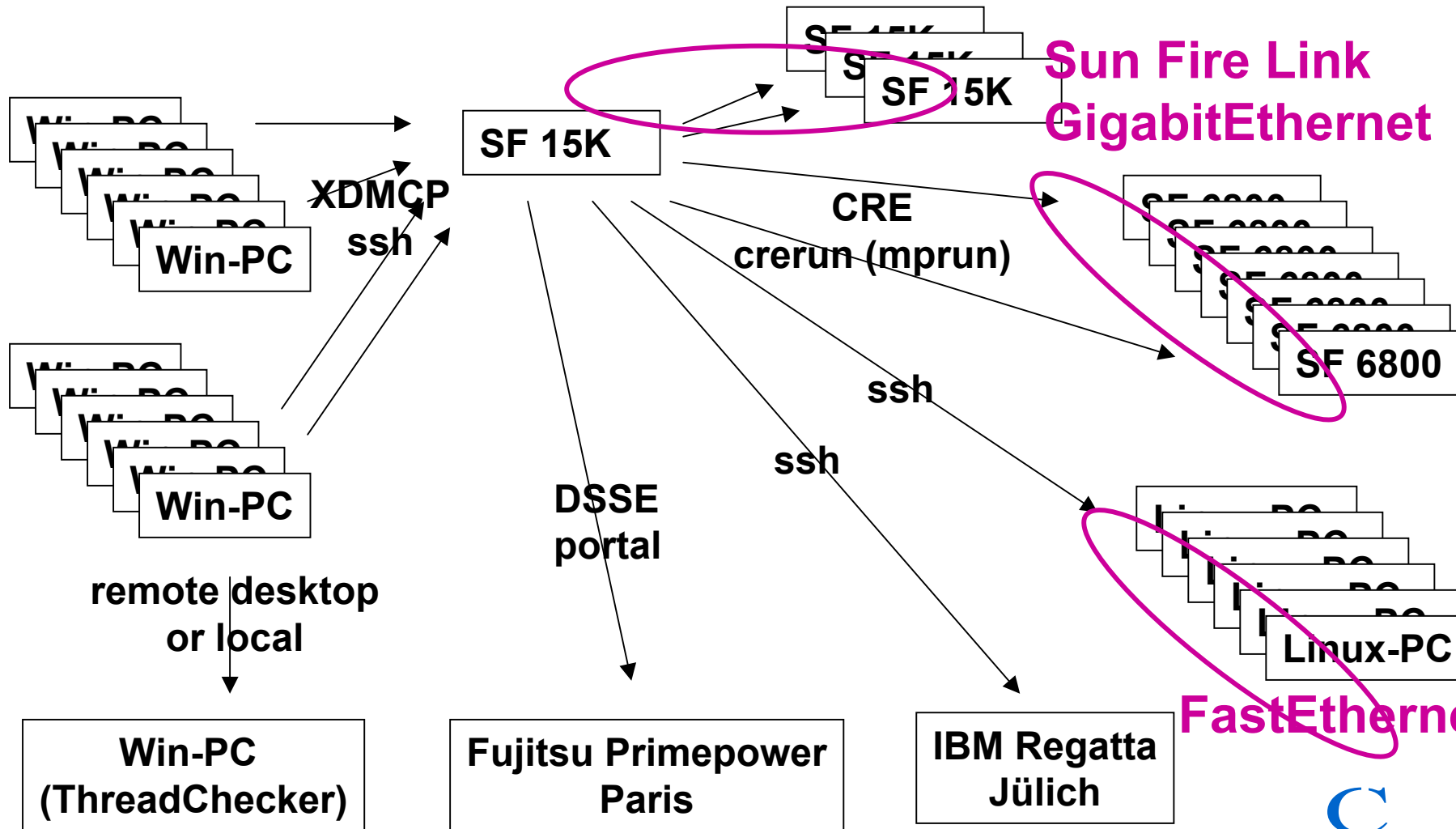
Organization - List

Yes, I would like to join ... Please (X=yes)		Wed.	Thursday		Fri.	
		Lunch	Lunch	Visit	Dinner	Lunch
		~13:00	~13:00	~14:00	20:00	~13:00
Name	Vorname	Mensa Vita (shuttle bus)	Mensa Vita	Computer Museum	Restaurant Kazan	Mensa Vita
Ayguade	Eduard					
Beelitz	Thomas					
Bronevetsky	Gregory					
Bücker	Martin	X	X	X	X	
Bull	Mark					
Chapman	Barbara					
Copty	Nawal					

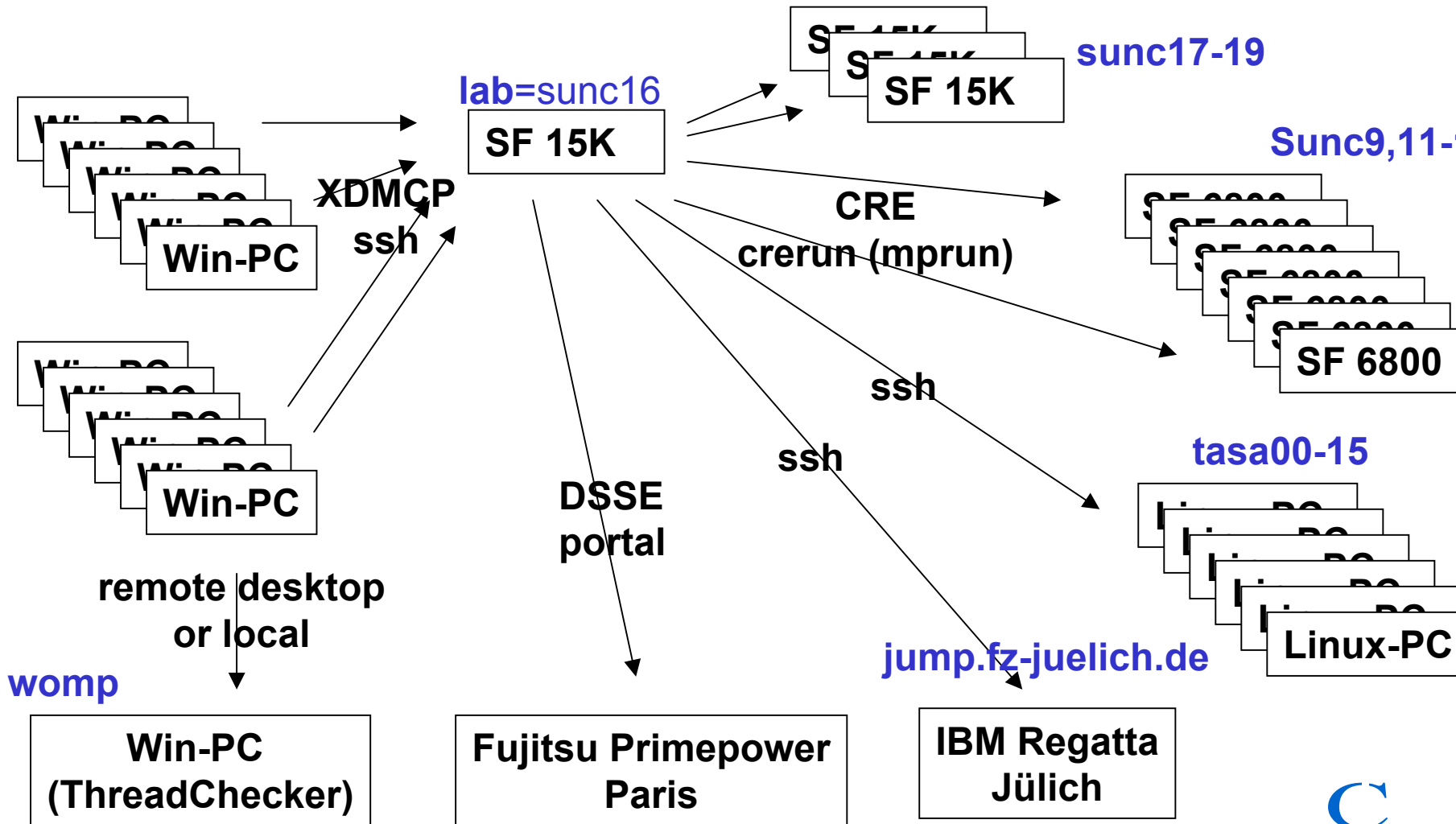
Hardware

- **7 x Sun Fire 6800 with 24 UltraSPACE III/Cu CPUs (900MHz)**
flat memory system with a bandwidth limited by the snooping bandwidth of 9,6 GB/s
- **4 x Sun Fire 15K with 72 UltraSPACE III/Cu CPUs (900MHz)**
cc-NUMA system with a backplane bandwidth of 43,2 GB/s
local memory bandwidth of 9,6 GB/s (4 CPUs per board)
first touch policy
- **IBM Regatta (Research Center Jülich) with 32 Power4 CPUs (1700 MHz)**
- **Fujitsu Primepower (Fujitsu Paris) with 4 SPARC CPUs (500 MHz)**
- **Linux-Cluster 15 x Double Processor Intel Pentium IV (850 MHz)**
- **Intel Pentium IV Xeon with 2 CPUs (2667 MHz)**

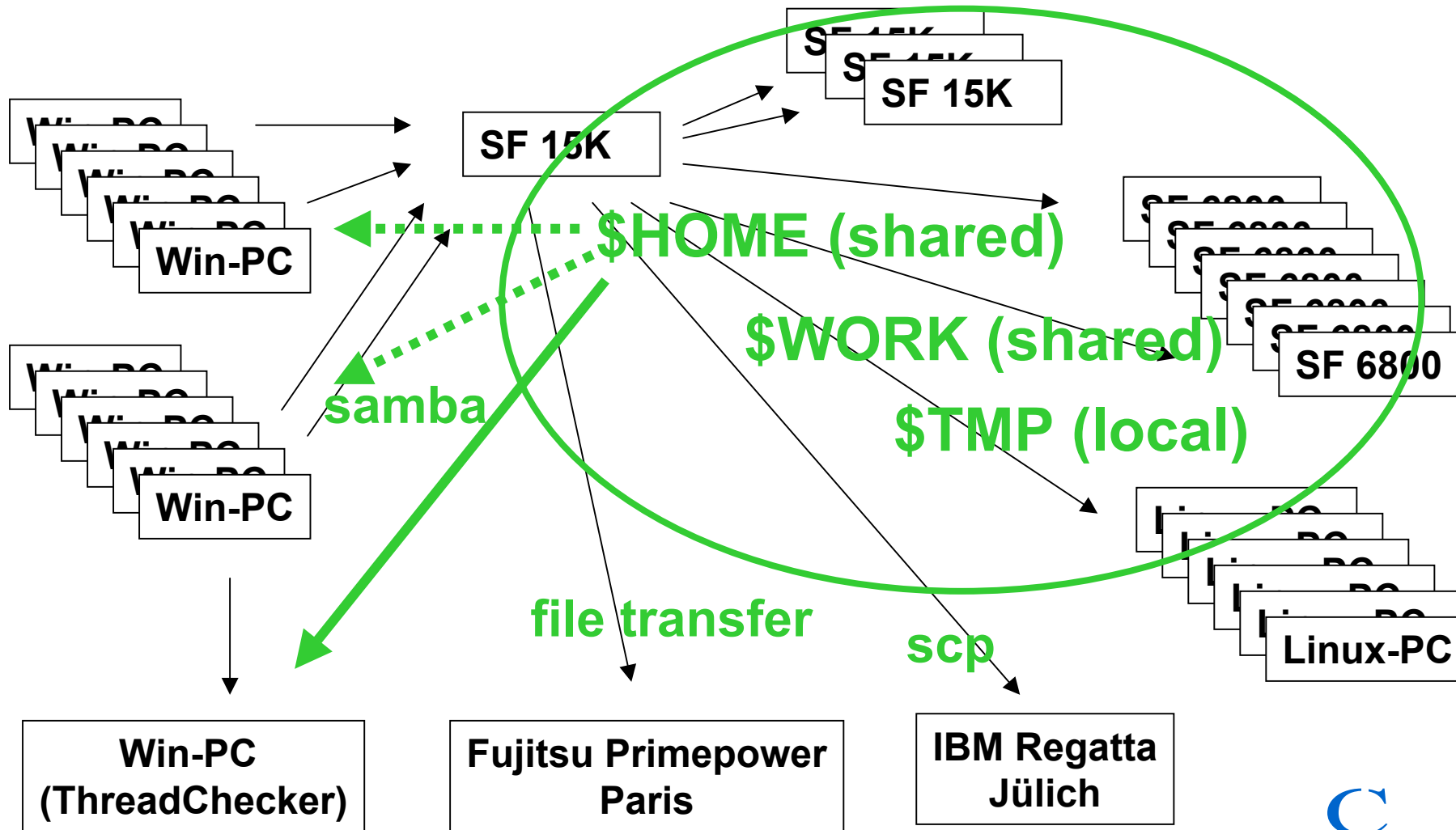
Network



Access



File Systems



crerun – Start Programs under Control of the CRE (Sun cluster runtime environment)

crerun [<options>] executable

Options:

- p <np>** start MPI program with <np> tasks
- t <nt>** start OpenMP program with <nt> threads
- o “string”** pass options in string to mprun (see man mprun)
- h** help text
- 15k** start program on one or more Sun Fire 15K
- 6800** start program on one or more Sun Fire 6800

Examples:

```
crerun ser.exe crerun -t 2 omp.exe
crerun -p 4 mpi.exe
crerun -p 4 -t 2 hybrid.exe
crerun -p 4 -o "-o -J" mpi.exe
crerun -p 2 -15k collect -g tst.erg -m on mpi.exe
```

Error Messages:

Not enough node cpus are available to satisfy resource request.

RWTH Specific Utilities (on Sun)

Library and include files with some utility functions

```
/usr/local_rwth/lib/libr_lib2.so
```

```
/usr/local_rwth/lib/libr_lib2_64.so
```

```
/usr/local_rwth/include/r_lib2.h
```

- Timing functions
- Wrapper for system functions, which are not available for Fortran.
- Miscellaneous system functions
- Memory placement utility functions (experimental): **r_memadvise**
- Processor Binding for serial and parallel applications (OpenMP, MPI, hybrid): **void r_omp_processorbind(void)**
(check with the command **pbindinfo**)

See manual pages

```
r_lib2, processorbind, pbind, memadvise
```
