

IFIP TC 10 Report – March 2003

Part 1 – Council

1- Meetings hold and scheduled

The annual TC10 meeting for 2002 was held on Aug. 29th in Montreal, Quebec, Canada in conjunction with the World Computer Congress 2002.

The annual meeting for 2003 is planned for the first week of December 2003 (around the date for the 2003 VLSI-SoC conference). It will be held at ABB Corporate Research in Baden/Switzerland. After the TC 10 meeting, B. Eschermann will offer a visit of the ABB Corporate Research Center in Switzerland for interested TC 10 representatives.

2- Changes in Officers and Membership

2.1- TC

The former TC 10 vice-chairs, Prof. C. Delgado-Kloos and Prof. C. Girault, had served long terms in this office and expressed their desire to retire. The same did hold for the TC 10 secretary, Prof. Erik Dirkx. TC 10 expresses thanks to them for their long service period.

Prof. D. Etiemble (FR) and Prof. T. Nanya (JP) have been elected as new vice-chairs. Dr. B. Eschermann (CH) was elected as secretary.

2.2- WGs

One new members was admitted to join WG 10.3 during the reporting period:

- Prof. Marco Danelutto

3- Working group activities

The TC consists of four active working groups: *10.1 – CAST, 10.3 – Concurrent Systems, 10.4 - Dependable Computing and Fault Tolerance, 10.5 - Design and Engineering of Electronic Systems*

3.1- Working Group WG10.1 CAST -- Computer Aided Systems Theory

Meetings

The next proposed meeting of the Committee will be held in Las Palmas, Gran Canaria, during the week of EUROCAST2003, February 24-28, 2003. At that meeting it is proposed to have a

review of WG10.1 activities, Committee Officers, and membership. A main topic for the WG10.1 Committee Meeting will be the choosing of a new Chairperson.

Sponsored events

No events have taken place during the period from September 2002.

As identified in a previous report, IFIP WG10.1 4th Joint Workshop on Formal Specifications of Computer-Based Systems (FSCBS'2003) will take place in Huntsville, Alabama, April 10-11, and will be co-located with the IEEE ECBS'2003 Conference.

A half-day WG10.1 Workshop on CAST is scheduled to take place in Las Palmas at the EUROCAST'2003 Conference (24-28 February, 2003); the WG10.1 Workshop will take place on Saturday 1st March, 2003, and will be followed by a WG10.1 Committee Meeting.

Attendance at FSCBS Workshops is generally of the order of 16-20, with attendance generally higher when the meetings are held in the USA. For each Workshop, a Proceedings of Abstracts (with ISBN number) is produced by the University of Stirling and this will continue. For FSCBS'2003 selected full papers will appear in a special issue of the Journal of Universal Computer Science. It is expected that this series of Workshops will continue in the future.

Changes of membership

No changes in membership during the report period.

Officers

No changes concerning officers during the report period.

Aims and Scope

No changes in WG10.1 Aims and Scope are being considered at the moment but a meeting of the Committee may consider this point within the next few months.

3.2 WG 10.3 (Concurrent Systems)

Meetings

In 2003, WG10.3 will be continuing their series of e-meetings/teleconferences that were started in 2002. The next WG 10.3 e-meeting/teleconference has been scheduled for March 13, 2003 at 4PM EST.

In 2003, in terms of additional working group activities, WG 10.3 is planning the following:

- A WG 10.3 task force for developing a vision and white paper in parallel computing.
- A research workshop based on papers from WG 10.3 members

Sponsored events

The conference activities of WG 10.3 are continuing at full speed. As of 2002, the WG 10.3 conference portfolio consisted of 7 ongoing events (PACT, Europar, SBAC-PAD (Brazil), IWCC (CIPC) (Romania), HiPC (India), ARCS (Germany), DIPES). In the interim period since August 2002, we have added one more conference to our portfolio:

ISCIS 18, The Eighteenth International Symposium on Computer and Information Sciences, which will be held in Antalya Turkey, in November 2003. The URL is:
<http://www.iscis03.metu.edu.tr> .

A number of WG 10.3 members are in the program committee of this conference. There are risks associated with a war in this region, but we are sure the organizers will be able to prepare contingency plans for the conference, to try to deal with such risks. For this year, IFIP WG 10.3 will be "in-cooperation" with the conference.

With WG 10.3 member Prof. Guang Gao (U. Delaware, US), and the ICT/Chinese Academy of Sciences, we are also organizing a new international conference on parallel computing in December 2003 in Beijing. This conference will be fully sponsored by IFIP WG 10.3, but we will seek help from local organizations, and from the IT industry in the Asia-Pacific region. An event form will be submitted to the TC10 shortly.

The Parallel Architectures and Compilation Techniques conference, PACT 2002 (<http://moss.csc.ncsu.edu/pact02>), was held in Charlotte, Virginia, USA, in October 2002. The conference was quite successful and it produced a surplus, despite the difficult environment in 2002.

Changes of membership

The nomination of a new WG 10.3 member, Prof. Marco Danelutto, from the University of Pisa, Italy, has been approved by the WG 10.3 and TC10.

Officers

No changes concerning officers during the report period.

Home-Page

The WG 10.3 web page has been cleaned up and improved. WG10.s has started using their own domain name which is easier to remember:
<http://www.ifipwg103.org> .

3.3 WG 10.4 (Dependable Computing and Fault-Tolerance)

Meetings

The winter 2003 Meeting (43rd meeting) of IFIP WG 10.4 took place on January 4-7, 2003, in Santa Maria, Sal, Cape Verde. The meeting was hosted by Prof. Paulo Veríssimo (Univ. of Lisbon, Portugal). It gathered 28 participants (13 members and 15 guests observers and speakers).

The main theme of the meeting was a two-day Workshop on Middleware for Adaptivity and Dependability coordinated by Dr. Gérard Le Lann (INRIA, Rocquencourt, France). The Workshop addressed a wide variety of relevant and complementary issues during four sessions (Middleware Systems and Projects, Computational Models and System Properties, Abstractions and Algorithmic Solutions, Abstractions and Frameworks for Reflective Middleware). The presentations and the specific discussion period allowed after each session resulted in many very lively and constructive exchanges.

In addition, 11 short presentations were delivered during two "Research Report" Sessions.

The final program and electronic copies of the slides presented during the Workshop are available from the WG web page at:

<http://www.dependability.org/wg10.4>

The next summer meeting (44th meeting) is scheduled to take place in Monterrey, CA, USA on June 25-29, 2003 -- right after DSN-2003 in San Francisco (see below).

The meeting will be hosted by Dr. Chuck Weinstock (SEI/CMU, Pittsburgh, PA, USA).

Two Workshops will be organized on the following topics (titles are still tentative):

- Assurance Assessment in Cyberspace (1 day)

Coordinators: Jayranayan H. Lala (DARPA, Arlington, VA, USA), William H. Sanders (Univ. Illinois, Urbana-Champaign, USA)

- Hardware Design and Dependability (2 days)

Coordinators: Jacob A. Abraham (Univ. of Texas, Austin, USA), Neeraj Suri (Univ. of Technology, Darmstadt, Germany)

Sponsored events

IEEE/IFIP International Conference on Dependable Systems and Networks (DSN)
[<http://www.dsn.org>]

The upcoming edition, DSN-2003, will be organized in San Francisco, CA, USA on June 22-25, 2003.

Conference Chair: Dr. Charles B. Weinstock, SEI/CMU, Pittsburgh, PA, USA

Honorary General Chair: Prof. Edward J. McCluskey, Stanford Univ., CA, USA

Conference Coordinator: Dr. Walt Heimerdinger, Honeywell Labs.,
Minneapolis, MN, USA

Dependable Computing and Communications Symposium (DCCS) PC co-Chairs:

- Dr. Richard D. Schlichting, AT&T Labs, Florham Park, NJ, USA
- Prof. João Gabriel Silva, Univ. of Coimbra, Portugal

Performance and Dependability Symposium (PDS) PC co-Chairs:

- Prof. Joanne Bechta Dugan, Univ. of Virginia, Charlottesville, USA
- Dr. Timothy Tsai, Avaya Labs. Research, Basking Ridge, NJ, USA

As usual, DSN-2003 will feature multiple tracks. As was introduced last year two symposia will be organized under the DSN umbrella: the Dependable Computing and Communications Symposium (DCCS), the conference will bring the Performance and Dependability Symposium (IPDS).

DCCS will feature 46 presentations (36 Regular Papers, 5 Practical Experience Reports and 3 Software and System Demonstrations) selected from 145 submissions.

The IPDS track will feature 28 presentations (27 Regular Papers and 1 Practical Experience Report) that were selected from 79 submissions.

These two symposia will also include several panels that are currently being prepared. Many other tracks will be offered that include:

- 4 Workshops: Model Checking for Dependable Software-Intensive Systems (1day), Design of Self-Managing Systems (1 day), Self-Stabilizing Systems (1.5 day), Principles of Dependable Systems (0.5 day).
- Tutorials
- a Student Forum
- Fast Abstracts

Tutorials are currently being selected. Submissions to the Student Forum and to the Fast Abstracts are welcome (see details on the web site).

The advance program and registration information will soon be available (in particular from the website).

Special Event

The WG is supporting the proposal put forward by Prof. Kane Kim to dedicate the Workshop on Object-oriented Real-time Dependable Systems - Fall 2003 (WORDSF-2003) to the memory of Prof. Edsger W. Dijkstra.

Other Upcoming Events Supported by WG 10.4

- WFTPDS-2003 (IEEE Workshop on Fault-Tolerant Parallel and Distributed Systems), Nice, France, April 22-26, 2003

http://www.ece.neu.edu/groups/netcom/FTPDS03_workshop.html

- ISORC-2003 (6th IEEE International Symp. on Object-oriented Real-time distributed Computing), Hakodate, Hokkaido, Japan, May 14-16, 2003

<http://www.vmars.tuwien.ac.at/isorc2003>

- WORDSF-2003 (Workshop on Object-oriented Real-time Dependable Systems- Fall), Capri, Italy, October 1-3, 2003

- SAFECOMP-2003 (22nd International Conference on Computer Safety, Reliability and Security), Edinburgh, Scotland, UK, September 23-26, 2003

<http://www.safecomp.org>

- SRDS-2003 (22nd Symp. on Reliable Distributed Systems), Florence, Italy, October 6-8, 2003

<http://SRDS2003.cnuce.cnr.it>

- LADC (Int. Symp. Latin American Dependable Computing), São Paulo, Brazil, October 21-24, 2003

<http://www.pcs.usp.br/~LADC2003>

- PRDC-2004 (10th Int. Symp. Pacific Rim Dependable Computing), Moorea, French Polynesia, March 3-5, 2004

<http://www.laas.fr/PRDC-10>

Special Interest Groups

SIGDeB - IFIP WG 10.4 Special Interest Group on Dependability Benchmarking

- Dr. Karama Kanoun, LAAS-CNRS, Toulouse, France -- Chair
- Dr. Lisa Spainhower, IBM, Poughkeepsie, NY, USA -- Vice Chair

The SIGDeB held its 7th meeting in Dulles, Washington DC, VA, USA, on February 11-12, 2003 (right after the IPDS PC meeting).

The meeting was well attended: 16 attendees (8 from industry and 8 from academia).

It is worth pointing out that this meeting was attended by 7 new members. Eight presentations were delivered and a "brainstorming" session allowed to better identify the relevant challenges and focus accordingly the future activities of the SIG.

The next SIGDeB meeting is scheduled for the end of June (in connection with DSN-2003).

Liaison with SIGES - Special Interest Group on Embedded Systems

Prof. Hermann Kopetz, Vienna Univ. of Technology, Austria, has been appointed to be the official representative of WG 10.4 to SIGES and thus to be one of the Vice-Chairs of the SIG.

Changes of membership

No change occurred in the membership during this period. Only updates in members affiliation (and thus nationality) are to be made:

- Prof. Algirdas Avizienis should now be listed under Lithuania (LT).
- Prof. Neeraj Suri should now be listed under Germany (DE).

Officers

No changes have been reported.

3.4- WG10.5 – Design and Engineering of Electronic Systems

Meetings

Meetings have not been held in the time frame of this report.

Next meetings are scheduled for Munich, in March 2003, during the DATE conference, and for Anaheim, in June 2003, during the DAC conference.

Sponsored events

DIPES'2002 – Workshop on Distributed and Parallel Embedded Systems, sponsored by the WG and organized by SIG-ES, was held in August 2002, as a special track of the IFIP World Congress in Montreal, Canada.

Next sponsored events will be:

- VLSI-SoC'03 – 12th International Conference on Very Large Scale Integration, which is the flagship event of WG 10.5, to be held in Darmsdadt, Germany, from December 1st to 3rd 2003; and
- CHARME'2003 – 12th Advanced Research Working Conference on Correct Hardware Design and Verification Methods, which is organized by SIG-CHARME, to be held in L'Aquila, Italy, from October 21st to 24th 2003.

In-cooperation events

FDL'2002 - Forum on Design Languages, was held in Marseille, France, from September 23rd to 27th 2002. It has been organized by ECSI and co-sponsored by WG 10.5. Papers have been published on a CD-ROM.

SBCCI'2002 - Symposium on Integrated Circuits and Systems Design, was held in Porto Alegre, Brazil, from September 9th to 13th 2002. It has been sponsored by SBC – Brazilian Computer Society and SBMICRO – Brazilian Microelectronics Society and co-sponsored by WG 10.5. The proceedings have been published by IEEE Computer Society Press.

IP-BASED DESIGN, the International Workshop on IP-based SoC Design, has been held in Grenoble, France, from October 30th to 31th 2002. It has been organized by INPG and Design & Reuse and co-sponsored by WG 10.5. Proceedings have been published by the local organizers and distributed to the participants.

All these events have been co-sponsored by Working Group 10.5 without financial involvement.

Next in-cooperation events in 2003 will be DATE (Munich, Germany, March 3rd to 7th), ACSD – Intl. Conf. on Application of Concurrency to System Design (Guimarães, Portugal, June 18th to 20th), FDL (Frankfurt, Germany, September 23rd to 26th), and SBCCI (São Paulo, Brazil, September 8th to 11th).

Special Interest Groups

The creation of a Special Interest Group on "Embedded Systems" (SIG-ES) has been approved after consideration on previous regular meetings and subsequent electronic discussion. It will be responsible for the organization of the DIPES conference ("Distributed and Parallel Embedded Systems"). The creation of SIG-ES has been submitted to TC10 for consideration. The SIG chair is Bernd Kleinjohann, from C-Lab, Germany. Although formally attached to WG 10.5, SIG-ES will be jointly sponsored by Working Groups 10.3 and 10.4.

Changes of membership

There are no changes in membership to report.

Aims and scope

The next WG meeting shall approve its new Aims and Scope. The new proposal for the Aims is as follows:

Electronic system design demands a tight integration on a very large profile of knowledge and skills ranging from system architecture to semiconductor physics.

Functionality of complex embedded or stand-alone systems, to be applied in areas such as general-purpose computing, telecommunications, automotive, entertainment, and multimedia, may be realized by various combinations of analog and digital hardware and software parts.

Systems can be implemented by single or multiple integrated circuits that can be either of special purpose, programmable or reconfigurable.

The working group aims at providing a forum amongst creative experts to explore problem areas and solutions for the design of such complex electronic systems and also disseminating the solutions to a broader industrial and educational sphere.

A proposal for the Scope resulted from a survey on research interests of the WG members and includes following topics:

VLSI Systems and Applications
System Design Methods
Embedded Systems
Reconfigurable Computing
Modeling and Specification
Design Validation
Formal Methods in Design
Synthesis
Design Environments
Physical Design
Test and Testability
Power-aware Design
Analog and Mixed-Signal Systems
Fundamental CAD Algorithms

New activities

A Working Group PhD forum will be organized for the first time at the next VLSI-SoC conference in Darmstadt, Germany, in December 2003. Funds are being requested from TC 10 and IFIP to support participation of PhD students from all continents.

WG members expressed interest in educational activities and on curricula development. A small Workshop on Education will be held during the next regular meeting in Munich, in March 2003, with 3 presentations. This activity shall be followed by subsequent ones, in future meetings.

Officers

Officers have not changed in this period. Chair is Flávio R. Wagner (UFRGS, Brazil). Three vice-chairs represent the three continents – Nikil Dutt (Irvine, USA), Masaharu Imai (Osaka University, Japan), and Eugenio Villar (Univ. of Cantabria, Spain).

Home-page

The WG 10.5 home-page is located at
<http://www.inf.ufrgs.br/ifip10-5/real-index.html>

4- TC meeting attendance statistics

The record of TC meeting attendance is given as an annex.

Part 2 – Technical Assembly

Annex: Attendance to TC10 meetings

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
10.1																	
10.3	X				X					X		X	X				X
10.4		X	X		X	X	X			X	X	X	X	X	X	X	X
10.5	X	X	X	X	X	X	X		X	X		X	X	X	X	X	
10.6									X								
10.7																	
ACM																	
AR																	
AT								X	X	X	X		X				
BE									X	X				X			
BG	X	X	X	X	X	X											
BR											X	X	X	X	X	X	X
CH														X	X	X	X
CN			X										X				
CZ									X	X				X			
DE		X			X	X	X		X	X	X	X	X	X	X	X	X
DK				X	X	X		X									
ES		X	X	X	X	X	X	X	X	X	X			X			
FR				X		X	X	X		X		X	X	X	X	X	X
FI		X	X	X		X							X				
GB	X	X	X	X	X	X	X	X		X							
GR																	
HU		X		X					X		X						
IEEE CS														X		X	
IT																	
JP								X		X	X	X		X	X		
NL	X	X	X	X	X	X	X	X	X	X							
NO						X											
PL					X												
PT																	
RU										X							
SE																	
SI															X		
SK										X							
US	X									X		X	X				
ZA				X	X			X	X								
Total	6	9	8	10	11	10	8	7	10	15	8	7	11	12	8	7	6

1: 1987 – Rochester
 2: 1988 – Munich
 3: 1989 – San Francisco
 4: 1990 – Paris
 5: 1991 – Toulouse
 6: 1992 – Lyngby

7: 1992 – Madrid
 8: 1993 – Manchester
 9: 1994 – Johannesburg
 10: March 1995 – Munich
 11: Sep. 1996 – Canberra
 12: Aug. 1997 - Gramado

13: Sep. 1998 – Budapest
 14: Aug. 1999 – Toulouse
 15: Aug. 2000 – Beijing
 16: Sep. 2001 – Pirenopolis
 17: Aug. 2002 - Montreal