

Annual Scientific Report 2003-2004

ESC Working Group on Computers in Cardiology (WG15)

Objectives

The objectives of the Working Group remain to promote the use of information technology (IT) as widely as possible within the field of Cardiology. This includes the application of IT in research and routine clinical practice, both inside and outside the hospital environment. A more expanded version of the scope of the working group activities can be found at http://www.escardio.org/bodies/WG/wg15/Aims_and_Activities/

Organisation of Sessions at the ESC Annual meeting in Munich from August 28th to September 1st 2004.

The members of the Working Group proposed a number of symposia etc. for consideration for the annual meeting. Ultimately, pressure on time slots dictated that only two such sessions could be accepted. These are as follows:

- **Symposium:** Tools to Support the Cardiologist in Clinical Decision Making
Sunday, August 29th 8.30-10 a.m.
- **Symposium :** Accessing Patient Data - Anytime Anywhere
Wednesday, September 1st 8.30-10 a.m.

In addition, one oral session and 24 poster presentations have been organised. These are as follows:

Oral Session

- Computer Based Advances in Cardiology
Monday, August 30th 4.30-6 p.m.

Poster Sessions

- Various e-poster sessions throughout the meeting.

Regrettably it is still necessary to report that the Working Group still receives for consideration many abstracts which are labeled as being linked with Computers in Cardiology but which are inappropriately directed to the Working Group for consideration. However, given the likely move away from computer demos, this may not be a problem in future.

Computer Demos at the ESC Meeting in Munich

This year, there will be six computer demo sessions (24 presentations) with two on Sunday 29th August, Monday 30th and Tuesday 31st August. There was a disappointing number of high quality computer demo abstracts received this year but the possibility is that in future, this form of presentation could be discontinued. This is due to the introduction of electronic posters which are likely to gain increasing acceptance. Notwithstanding, many types of computer demonstration require an online connection to the internet and the matter will need to be considered carefully for the 2005 meeting in Stockholm.

ESC Business

As in the past, the Chairman and Co-Chairman of the Working Group have participated in the various review processes that have taken place at the Heart House over the past year both in respect of the organisation of the annual congress and in respect of changes to the structure of the Society. A more open form of election of Council Members as well as members of the nominating committee will be instituted at the Munich meeting.

Computers in Cardiology Annual Conference

This year the annual Computers in Cardiology conference will be held in Chicago from 19th to 22nd September. Working Group 15 has been linked with the Computers in Cardiology organisation for many years and again this year the Chairman of WG15 has contributed to the selection of abstracts and the organization of the programme in Chicago. Because the Chairmanship of WG15 changes at the end of the Munich meeting, the current Vice Chairman will become a member of the Computers in Cardiology Board and will attend the annual board meeting in Chicago in September. The current Chairman will also attend the conference itself to present abstracts and chair a session.

Last year the Computers in Cardiology meeting was held in Thessaloniki, Greece from 21st to 24th September 2003. Professor Alan Murray, a member of WG15 and who is also editor of the conference proceedings, has kindly prepared the following report on the meeting.

Report on Computers in Cardiology Annual Conference Thessaloniki, Chalkidiki, Greece - September 2003

Computers in Cardiology exists to encourage inter-disciplinary communication among cardiologists and other clinicians, engineers, computer scientists and physical scientists, and physiologists. The annual meeting is the most important meeting of the *Computers in Cardiology* Working Group of the European Society of Cardiology. The Chairman of this Working Group, Professor Peter Macfarlane, is on the Board of Directors, and this Board includes world wide representation to ensure *Computers in Cardiology* is truly international.

In 2003, we met in September in Thessaloniki Chalkidiki, where the annual conference was ably chaired by Dr Nicos Maglaveras, and assisted by Drs Costas Pappas, Michael Strintzis, George Louridas, George Giannoglou, Vassilios Vassilikos, Athanasios Dimitriadis, Anastasios Bezerianos, Stelios Orphanoudakis, Ioanna Chouvarda and Panagiotis Bamidis.

The opening symposium focused on an area of local interest. The organisers chose the topic of "Information society technologies". This covered disease prevention and more generally the improvement of the quality of health services for cardiovascular diseases. The benefits of pervasive computing, ambient intelligence and telemedicine were stressed.

The main *Computers in Cardiology* Symposium opened the following day with presentations for the Rosanna Degani Young Investigator Award, which was won by

Cristiana Corsi from Bologna, Italy, collaborating with colleagues from Bordeaux and Milano. Her paper was “Automated quantification of the effects of low body negative pressure on left ventricular function during parabolic flight”.

This was followed by 26 sessions over the 2½ day period. This might seem a hectic programme, but the meeting is very deliberately designed to give participants time to interact and discuss, especially on the opening day. I can give only a brief outline of the research presented. Cardiac telemedicine was well featured, as was image analysis techniques and a wide variety of ECG and electrophysiology data analysis. The range of topics in ECG analysis included atrial fibrillation, arrhythmias, and non-linear techniques. Imaging topics included blood flow, left ventricular function, and DICOM. There were also sessions on circulatory and cardiovascular control, heart rate variability, as well as current advances in cardiology information systems.

The *Computers in Cardiology Challenge* which started only three years previously is now seen as an important part of the proceedings. It has developed from the detection of sleep apnoea from the ECG alone, the detection of patients at risk of atrial fibrillation, and simulations of heart rate variability, to the 2003 challenge of detecting ischaemic ST changes. As in previous years, the competition raised lots of excitement, along with calls for further challenges. The data for all challenges are still on 'PhysioNet' (www.physionet.org). Help keep these challenges alive.

As always in my reports, I end with reference to the Poster Session. This session is one of the most popular at *Computers in Cardiology*. It has a well-publicised session all to itself, and almost everyone turns up for it. As usual, there was so much discussion that delegates had to be encouraged to leave, when it was well past the official end of the session.

Hopefully you are now interested enough to want to look at the Proceedings. They were published in December 2003, two months after the meeting, and contain 207 manuscripts in 864 pages. The papers are indexed, so you should be able to find things fairly easily. It is published by IEEE (*Computers in Cardiology 2002*, Vol 30, Catalogue No. 03CH37504, ISBN 0-7803-8170-X). Everyone who came to the conference also received the proceedings on CD.

For those of you who have access to the *Web of Science* produced by the Institute for Scientific Information, you can find *Computers in Cardiology* abstracts from 1991, under their Index to Scientific & Technical Publications (ISTP).

I and all other Members of the ESC Working Group hope that we have encouraged you to come to *Computers in Cardiology 2004*. It is hosted by Northwestern University, and will be held in Chicago, USA from 19-22 September 2004, under the chairmanship of Steven Swiryn. We hope to see you there.

Alan Murray
Editor, *Computers in Cardiology*

<http://www.cinc.org> *Computers in Cardiology* Home Page

Other Activities

The Working Group was associated with the 5th International Heart Health Conference held in Milan from June 13th to 16th 2004. The WG Chairman together with Dr. Christian Pristipino organized a session dealing with the benefits of utilising computer based technologies in cardiology. The meeting was regrettably not as well attended as had been hoped but nevertheless was excellently prepared by the local Italian Organising Committee.

The Chairman of WG15 was involved in deliberations on the use of E-posters as a mechanism for presenting abstracts at the ESC. The Chairman felt that there should be a pilot study where a small percentage of abstracts was presented in this manner at Munich so that there could be initial feedback on the usefulness and feasibility of this approach for a large meeting such as the ESC. This view was accepted and there will be a section of the posters presented in electronic format this year. Members of WG15 will also contribute to teaching sessions at the conference to illustrate to delegates how electronic posters are assembled as the likelihood is that a higher percentage of posters, possibly 100%, will be presented in this way in future.

Internet Activities

The ESC has always been well organized in respect of the use of the internet for abstract selection etc. The past year has proved to be no exception where all abstracts were distributed for review and subsequent marking using internet based techniques. WG15 continues to have representation on the ESC web committee through its Vice Chairman Dr. Willem Dassen. The ESC website was totally redesigned recently and is now an extremely comprehensive site.

Membership

The membership of the society has remained static during the year at 161. The Chairmanship of the Working Group passes to Dr. Willem Dassen at the end of the Munich meeting.

Financial situation

The working group finances continue to show a healthy balance.

Conclusion

The working group has remained active in the past year and has made a proportionate contribution to the activities of the ESC, in particular the annual ESC meeting, as well as to the annual Computers in Cardiology meeting.

Peter W. Macfarlane
Chairman

Willem Dassen
Vice Chairman