Message from WFCS 2000 General Co-Chairmen

It is our pleasure to welcome all participants to the third IEEE International Workshop on Factory Communication Systems, and the "Invisible City" of Porto.

The WFCS series of workshops has established itself as the most prominent IEEE technical event dedicated to factory communication systems. WFCS'2000, co-sponsored by the IEEE Industrial Electronics Society (IEEE-IES) and the School of Engineering of the Polytechnic Institute of Porto (ISEP-IIP). The previous two workshops were held in Leysin, Switzerland, in October 1993, and Barcelona, Spain, in October 1997.

The location of WFCS'2000 in Porto is a reflection of the growing role of researches from Portugal in the areas of real-time communication systems, factory communication systems, and the Internet technologies, to mention some. It is also a reflection of the atmosphere of encouragement at the Polytechnic Institute of Porto for its researches to pursue research at the cutting edge of technology.

WFCS'2000 features an excellent technical program, which includes plenary presentations delivered by leading authorities from the industry and academia. The quality of the program is a combination of quality submissions and diligent work of the members of the International Program Committee. We would like to acknowledge the contributions of all members of the Program Committee, and in particular Francisco Vasques and Guy Juanele, WFCS'2000 Program Co-Chairs. We are also fortunate to have two outstanding plenary speakers: Dr Greg Bollella of IBM (USA) and Professor Dieterm Dietrich of Technical University of Vienna (Austria). Dr. Greg Bollella will present an overview of the specification of real-time Java, Professor Dietrich Dietrich will be talking about Networked Fieldbus Systems, prospects and challenges.

The conference program also includes two sessions devoted to Industrial Practice and Experience. The selection process for these sessions has changed this year, in order to reinforce the interaction between academia and the industry.

For the first time in the workshop history, WFCS'2000 will feature two sessions on Work in Progress (WIP). The WIP papers will be, for sure, of interest to the researches from academia and industry as they address issues at the cutting edge of technology. We would like to acknowledge an excellent selection work done by WIP Co-Chaime Thilo Sauter and Luis Almeida.

Another novum at WFCS'2000 is "hands-on" day. This day features special industry presentations on the actual application of emerging technologies in factory communication systems and industrial automation, and "hands-on" demonstrations involving industrial equipment. We trust this arrangement will provide an opportunity for more intimate interaction between the industry and academia. It should also serves as an opportunity for researchers from the academia to learn about new and relevant problems and challenges emerging from actual industrial applications.

An event of this size cannot be organised without the cooperation of a large number of people. First of all we thank to the Program Co-Chairs, Francisco Vasques and Guy Juanele, for selecting an excellent program committee, organising and following a rigorous paper selection criteria, and putting together an excellent technical program. We also thank to the program committee members for their time and efforts. The WIP sessions would not be possible without the effort of Luis Almeida and Thilo Sauter. Filipe Pacheco worked hard to publicise the event and Luis Miguel Paulo made sure that the conference proceedings were available on time. Marco Alves was irreplaceable in helping setting up the "hands-on" day and the industrial exhibition. He has also done a tremendous job in managing the registration process, and was always available in emergency situations. Luis Lino Ferreira managed the finances, and Berta Bastida did an excellent job managing local arrangements. Ana Costa, managing the WFCS'2000 secretariat, did an excellent job in coordinating activities of the Local Organizing Committee.

The success of any conference depends on the quality of the program and participation of people. We thank you all for being here. We trust that you will find the technical program intellectually stimulating, and your stay in the beautiful and historic city of Porto enjoyable.

Eduardo Tovar and Richard Zurawski, WFCS'2000 General Co-Chairmen

Message from the WIP Session Co-Chairmen

Factory communications is a rapidly evolving field, both in practical application and research. Networking and automation are currently major driving forces, and there are many open problems still to be solved. For this reason, the organizers of WFCS 2000 decided for the first time to also include a "Work in Progress" session in the program as a forum for presenting and discussing ongoing projects.

In response to the call, we received the overwhelming number of 21 submissions. Due to space limitations, only 14 papers could be accepted for presentation in the workshop. A fast but thorough reviewing process allowed to select the best papers in terms of originality, clarity and possible impact of expected results.

The papers show very well which topics receive most attention today. Three articles deal with overcoming the limitations (both spatial and data rate) of fieldbus systems, two examine the comparatively new subject of wireless fieldbusses. New hardware to speed up networks is proposed by another two papers, and one article proposes new solutions to the old communicating-tasks scheduling problem. As systems grow more complex, specification, engineering, and management becomes problematic. This fact is mirrored by six papers dealing with various aspects of management, data representation, specification, but also simulation of complex systems.

We would like to thank all the authors who submitted their work to this WIP session. It seems we have gathered the necessary ingredients for a very interesting and stimulating discussion. We would also like to acknowledge the precious help given by José Alberto Fonseca, Ernesto Martins, José Luis Azevedo and Paulo Pedroja in the reviewing process. Last but not the least, we also acknowledge the cooperation given by the Electronics and Telecommunications Department of the University of Aveiro (DEETUA) which allowed to publish the WIP proceedings as a special number of its journal Revista do DEETUA.

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