Foreword

Deployment is the act of taking components and readying them for productive use. There may be steps following deployment, such as installation or management related functions, but all decisions about how to configure and compose/assemble a component are made at the deployment stage. This is therefore the one opportunity in the software lifecycle to bridge the gap between what the component developer couldn't know about the deployment environment and what the environment's developer couldn't know about the open set of deployable components.

It is not surprising that deployment as a dedicated step gains importance when addressing issues of system-wide qualities, such as coping with constrained resources or preparing for component adaptation and system evolution. Yet, component deployment is still a discipline in its infancy: it became mainstream practice only in the mid 1990s. Much of the best practice impulse originated in products like Microsoft's Transaction Server and its approach to attribute-based programming and later products like Enterprise JavaBeans and now the Corba Component Model. All these address the specific needs of enterprise application servers. However, the potential of the deployment concept goes far beyond this. Deployment can and should touch effectively all truly component-based solutions.

The proceedings of Component Deployment 2002 represent a good cross-section of the gamut of deployment issues. From customization to address resource constraints to reconfiguration of deployed systems and from architecture to design to languages, the avid reader will find some contribution.

Having said all this, it shouldn't go unnoticed that the conference venue is also "always worth a visit".

April 2002 Clemens Szyperski

Preface

The idea of holding a conference on Component Deployment was conceived in Berlin in June 2001. Within a few days, the nineteen people listed overleaf, all leaders in the field, had lent their enthusiastic support to the venture, and agreed to serve on the Programme Committee and executive. The conference was arranged to be co-located with ACM PLDI'02, which for the first time was being held outside the USA. It is fitting that a meeting on component deployment should follow one on programming language design and implementation, as the subjects complement each other extremely well.

In spite of the difficult times which might have discouraged potential authors from travelling to a conference, we received 43 submissions. Of these the majority were from France, Germany, and the United States, with others from Australia, Italy, Korea, Norway, South Africa, Spain, Switzerland, and the United Kingdom.

The members of the Program Committee took their refereeing task very seriously, and wanted to be sure that this very first conference on Component Deployment would set the scene for years to come. It was therefore resolved to have a physical meeting, and we gathered at University College, London on 17 January 2002. Eleven members were at the meeting and were joined for some lively debate and decision-making by three more on an international telephone conference call. Because of the two-day time limitation, we were initially looking for only 15 papers, but the quality and interest value of the submissions was so high, that we decided to select 13 and have 6 more as short papers, to be presented as posters. All the papers are included in these proceedings.

Bertrand Meyer from the Technical University in Zurich graciously agreed to give the keynote address on "From contracts to trusted components", a subject absolutely central to the theme of the conference.

The paper submissions and reviewing process were supported by the START system (http://www.softconf.com). I would like to thank Nigel Horspool for arranging for us to use the system, and for maintaining it at UVic. His support for the conference did not stop there, and he assisted in the organization in numerous ways, with advice and practical help, for which I am very grateful.

I wish to thank the Program Committee members for their selfless dedication and their excellent advice and friendly comments over the past year. Stephan Hermann, my co-chair, was an energetic and hard-working partner, with good insight into the scientific aspects of what we were trying to achieve, and was also a great help with the local organization. I'd like to thank Wolfgang Emmerich for hosting the PC meeting and his assistant Sally Longley for making all the arrangements. My two research assistants Basil Worrall and Kathrin Berg were a great help in advertising the conference and preparing the papers at various stages. I am very grateful to Stefan Jähnichen for offering the support of the Department of Computer Science at TU-Berlin as a command centre for the

conference, and for obtaining the financial backing of our sponsors, Daimler-Chrysler and Microsoft. In terms of assistance, Jens Knoop, the Chair of PLDI, has been absolutely invaluable, and without him, we would not have been able to raise the conference to the profile it has managed to achieve.

Last, but by no means least, the most important person in the organisation of this conference has been Doris Fähndrich of TU-Berlin who has single handedly set up and maintained the website, organized all the local arrangements, finances, preparation of the advertising posters, proceedings, and registrations, always cheerfully, and extremely efficiently. Vielen Dank, Doris!

The conference takes place in Berlin, a city of great building projects over the past few years. As we reflect on the beauty, symmetry, and longevity of our surroundings, we can be inspired to develop software that will be as functional, long lasting, and indeed beautiful.

May 2002 Judith Bishop

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