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Preface

Visual information systems are information systems for visual computing. Visual computing is computing on visual objects. Some visual objects such as images are inherently visual in the sense that their primary representation is the visual representation. Some visual objects such as data structures are derivatively visual in the sense that their primary representation is not the visual representation, but can be transformed into a visual representation. Images and data structures are the two extremes. Other visual objects such as maps may fall somewhere in between the two. Visual computing often involves the transformation from one type of visual objects into another type of visual objects, or into the same type of visual objects, to accomplish certain objectives such as information reduction, object recognition, and so on.

In visual information systems design it is also important to ask the following question: who performs the visual computing? The answer to this question determines the approach to visual computing. For instance it is possible that primarily the computer performs the visual computing and the human merely observes the results. It is also possible that primarily the human performs the visual computing and the computer plays a supporting role. Often the human and the computer are both involved as equal partners in visual computing and there are visual interactions. Formal or informal visual languages are usually needed to facilitate such visual interactions.

In this conference various research issues in visual information systems design and visual computing are explored. The papers are collectively published in this volume. We would like to express our special thanks to the sponsorship of the National Science Council, ROC, the Lee and MTI Center of National Chiao Tung University, ROC, and Knowledge Systems Institute, USA.

January 2002

Shi-Kuo Chang, Zen Chen, and Suh-Yin Lee

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