

Preface

The semiconductor industry continues to expand, both technically and financially. Competition is fierce between manufacturers, as the demand for more powerful and *reliable* systems drives the industry. The companies that have been most successful have been able to push the performance and complexity of their technology to the limit, while still producing a dependable product. To stay on the reliable side of the technology limit, the return on investment for failure analysis is beginning to have the same cost/benefit attention as production capability. The complexity of present and future semiconductor products requires strategic planning and failure analysis capability development comparable to the technology. The challenges include smaller features, multi-chip module and flip chip packaging, reduced operating voltages, and increases in the number of transistors, interconnection levels and operating frequencies. If the ability to examine semiconductor devices does not keep pace with production advances, the capability to provide reliable products will become limited by failure analysis and characterization technology.

The ISTFA event continues to provide a forum to address the failure analysis concerns related to all electronic devices. ISTFA is a unique learning environment with technical sessions, panel discussions, workshops, and an equipment exposition, all targeted for failure analysis, product and reliability engineers. The technical excellence and breadth of this 22nd ISTFA symposium reflects the pressing needs of the semiconductor industry. The new ideas and techniques presented, equipment demonstrated, and professional networking at ISTFA will assist analysts with the challenges of today, and help prepare them for the skills needed tomorrow.