

Knowledge is Power. . .

2002 is finally behind us, and much of the semiconductor industry is looking toward the new year with "cautious optimism." As this past downturn has taught us, no one can predict with complete accuracy when the next recovery will arrive. But despite all the speculation and uncertainty, one thing has remained constant throughout this past cycle—technology innovation continues to move forward at an unrelenting pace. Design rules are continuing to shrink, and advanced materials, like copper, low- κ and high- κ dielectrics, and silicon-on-insulator (SOI), are ramping up into production. Even as this issue goes to press we learn that IBM and AMD have joined forces to co-develop process technologies for high-performance logic products and microprocessors, at 65-nanometer and 45-nm critical dimensions.

Continued investments in R&D have played a major role in driving the adoption of new technologies. But what truly drives technology adoption is sharing the knowledge and experience gained through the development process. Knowledge, as the old adage says, is indeed power. It is the dissemination of that knowledge among our peers—through conferences, symposia and other forums—that has helped drive technology innovation in our industry. Many of us are now gearing up for SPIE Microlithography 2003, one of the industry's most prestigious lithography conferences. Forums such as these enable industry experts to come together to discuss new methodologies, industry trends and other developments.

The concept of the forum as a place where great minds meet to exchange ideas is nothing new, of course. In Ancient Rome, the Forum Romanum served as the cultural center of Roman society. It was here that business was conducted, political issues debated and decided, and religious ceremonies performed. Today's conference attendees may have discarded their togas for business suits, but forums continue to provide a vital link for industry experts to share their experiences and learn new and innovative methodologies that will move the industry ever forward.

For more than 10 years, KLA-Tencor's Yield Management Seminars have served as one of the few public platforms for educating the semiconductor industry on the latest methodologies for accelerating semiconductor yields. YMS forums have brought together technical experts from around the globe to share with their peers their experiences in overcoming some of the industry's most challenging technology hurdles—with papers presented on a broad array of yield-critical topics, such as defect monitoring in advanced lithography cells, qualifying 193 nm resists, new methods for inspecting contact layer reticles, and evaluating the production-readiness of low- κ films. Several of the articles that have appeared in Yield Management Solutions have been based in one form or another on third-party papers presented at one of our YMS forums—making the magazine a sort of quarterly forum in its own right.

Take, for example, this issue's cover story on defect management in copper devices. The piece includes case studies from Infineon, Texas Instruments and AMD on the use of optical and e-beam wafer inspection, in conjunction with advanced sampling strategies, to ramp their 130-nm (and smaller design rules) copper processes into production. The findings offer compelling proof that even with the most difficult process challenges, the right yield management strategy can keep your process under control. This kind of research fuels the knowledge-sharing that is the lifeblood of our YMS forums. We hope you enjoy it, and we look forward to seeing you at our next YMS.



A handwritten signature in black ink that reads "Ken Schroeder". The signature is fluid and cursive, with a large initial "K" and "S".

Ken Schroeder
Chief Executive Officer

Yield Management SOLUTIONS

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