

The State Of The Photonics Industry

Presentation Given By Tom Hausken, PhD, Senior Advisor, The Optical Society (OSA) At The Mi-Light Oct 2016 Members Meeting

For those of you who could not attend the Mi-Light Fall Colors Members Meeting at the Grand Traverse Resort, you missed Tom's presentation about what is going on in the Photonics Industry as a whole. The full 46 page detailed report, including interesting statistics from the US and overseas, is on the Mi-Light website, Members Only section and is available to download. Below are a few of the highlights.

The Optical Society is celebrating 100 years. It is hard to believe when all we can think about is the latest technology. Tom explained what was going on in the past 100 years to give us all focus. Products have evolved in terms of vision correction, lighting, displays, imaging, optical communications, UV microlithography and deep science. We were left thinking about what technology strides have been gained in that span of time until the present day.

Today, global photonics is a \$77 trillion dollar industry. With systems and components making up about \$400 billion and Passive Optics at \$36 billion. Tom described the industry in eight major areas for tracking purposes; Biomedical, Communications, Consumer Imaging, Display, Lighting, Machine Tools, Security/Other, and Solar. He talked about the revenues of each group taking into consideration the exchange rates of global firms. Revenues are going down due to cost reductions, lower inventory levels, and currency values. Photonics markets are maturing. The US photonics economy is "holding its own," Tom said. After the 2008 housing bubble, he anticipated a higher growth rate than what we are enjoying today, but things are still headed in a positive direction albeit slower than previously hoped.

The US photonics employment picture shows optics & photonics components being responsible for "125,000 jobs with 900 companies. Products enabled by optics & photonics accounted for 385,000 jobs at 3,300 companies. Millions more jobs are in the firms using optics & photonics in downstream and end-use markets." Smaller companies lead high tech innovation while the larger companies account for 80% of the market. Thus, photonics employers are widely disbursed geographically.

What will the next 100 years of photonics look like? Tom explained that resources are going to be more constrained. Some of the product hot spots will be; Wi-Fi, water & water treatment, public health, security (personal, national and corporate), and automation, like drones and autos. The laser market seems to be maturing with smaller technological gains than previously recorded. The future will bring new challenges and opportunities. Tom talked about "photonics in the long view" using a graph showing over 15 industries and where they are on the road to becoming a maturing market.

There were too many nuggets of information in Tom's presentation to include them all here. In conclusion, he elaborated that if your company is surviving or even modestly growing, you are doing well. Marketing is a huge problem in photonics because it is highly fragmented. Other industries also have this same issue. It is difficult to figure out the market size of any particular photonics sector. Photonics is driven by sales people. There will be a consolidation of some products and applications in the future. As some companies consolidate, others will pop up with new products. Our time came to an end leaving us feeling up to date on the trends in the photonics industry.



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