

EPOCH DIRECT

Research

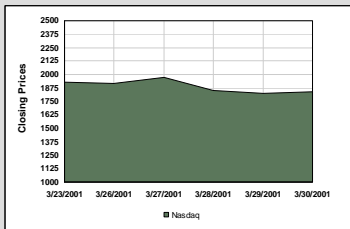
Matt Adams
Mark Langley
Mark Langner
Adria Markus
Seth Spalding
Mark Verbeck

Epoch Indices for the Week

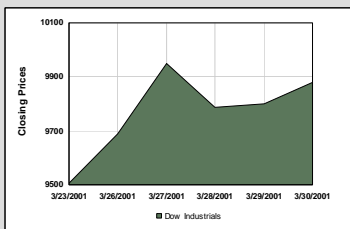
Broadband & IP Svcs:	-10.05%
Comm Equipment:	-16.05%
Internet:	+0.96%
Software:	-5.17%

Market Statistics (5-Day)

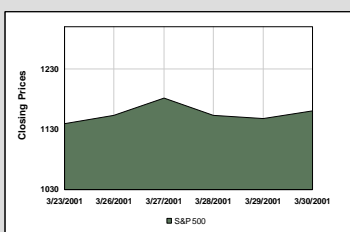
Nasdaq (-4.58%)



Dow (3.93%)



S&P (1.80%)



How Times Have Changed: A Review of OFC 2001

By Mark Langley, Director and Senior Analyst

Pocket protectors outnumbered suits 30 to 1 at the Optical Fiber Communications conference five years ago, but that has **changed as the industry matured**. Three years ago, Uniphase, ETEK Dynamics, SDL Inc., Integrated Optics Corp., Epitaxx, JDS Fitel, and OCLI had separate booths, many with competing offerings. Two years ago, equipment vendors aggressively sought out component vendors on the floor. Last year the investment bankers and venture capitalists aggressively pursued equipment and component vendors. This year, at the Anaheim Convention Center, **component vendors tenaciously wooed equipment vendors**, and the above-named companies could be found in the "theme park" we referred to as "JDSU-land" (taking our cue from the nearby Disneyland).

This year **more than 970 exhibitors vied for the attention** of 38,000 participants. This breaks down to approximately 39 participants per exhibitor. The exhibit hall was open for 26 hours over three days, thus leaving each visitor approximately 1.6 minutes per booth. Of course, some booths could be covered in one-fifth that time, while others -- such as JDSU-land -- could take days.

Eschewing the ever-bullish keynote speeches, OFC began on Monday with **Corning slashing its revenue and earnings guidance** and its fiber and components markets forecasts. The IPO window was closed tight, and JDS Uniphase turned from acquisitions for capacity to acquisitions for technology.

After five days of talks with hundreds of participants and exhibitors, we have summarized what we saw as the **overarching trends**.

Products, Processes and Manufacturing

1. Automation efforts are well underway in manufacturing, testing and measurement.
2. Photonic bandgap fibers (a.k.a., omniguides, crystal fibers, microstructured fibers, holey fibers) are gaining momentum.
3. Component flexibility is in demand and becoming available -- tunable lasers and filters and variable chromatic dispersion compensators were crowd pleasers.
4. Semiconductors again have the status of being gating factors for some applications. Building on last's year's trend, equipment vendors are giving communications semiconductor companies more attention as high speed optics uncover performance gaps once the data reenters the electronic domain, requiring innovative designs and different materials.

[more]



Top 10 Stocks Bought*

Niku Corp. (NIKU)	+10.57%
Aether Systems (AETH)	+6.66%
Metromedia Fiber (MFNX)	+5.59%
Digital Island (ISLD)	+4.84%
InterNap (INAP)	+4.60%
Next Level Comm. (NXTV)	+4.48%
Vitria (VITR)	+4.17%
Red Hat Software (RHAT)	+4.16%
Akamai (AKAM)	+3.64%
Ariba ³ (ARBA)	+3.43%

Top 10 Stocks Sold*

Efficient Networks (EFNT)	-39.11%
Great Plains Software (GPSI)	-5.58%
webMethods (WEBM)	-5.00%
Finisar ¹ (FNSR)	-3.10%
Micromuse (MUSE)	-2.92%
Vignette (VIGN)	-2.86%
Ciena (CIEN)	-2.35%
New Focus ² (NUFO)	-2.15%
Verisign (VRSN)	-2.03%
BEA Systems (BEAS)	-1.86%

***Notes**

Percent change from the prior week in the number of technology-related shares held by customers of our brokerage partners.

5. Integration efforts were highly visible, through (many) planar lightwave circuit (PLC) vendors, manufacturers of wafer-based integrated optical sub-assemblies, optical variations of silicon semiconductor multichip modules and application-specific integrated circuits, and hybrid (PLC and free-space) sub-assemblies.
6. Power: Highlights of the show included improvements in Raman amplifiers, erbium-doped fiber amplifiers (EDFAs), erbium-doped waveguide amplifiers (EDWAs) and semiconductor amplifiers (SOAs) and the exhibiting of high-power vertical cavity surface emitting laser (VCSEL)-based pumps and linear optical amplifiers (LOAs), along with interesting papers on S-band amplifiers. On specifications, we believe some confusion has come with the shift from long-haul to metro applications. Cost per decibel of gain (\$/dB) in long haul is assumed to be on a per-channel basis, since the amplifiers are multichannel capable. Some metro amps are specified on a cost/dB basis for single channel applications and others are (more correctly, we think) on a cost/dB/channel basis -- a subtle, but important, distinction.
7. Too Many Solutions: OFC 2000 was for disruptive technologies, and OFC 2001 was for disruptive technologies coupled with a year of disruptive economics. The sheer volume of vendors at OFC 2001 leads us to think that OFC 2002 may be appropriately subtitled "Survival of the Fittest." Standards, and even consensus views are lacking. For example, we counted nine switching technologies, of which microelectromechanical systems (MEMS) were one, and we estimate that more than 60 companies focus on MEMS.
8. Packaging help is on the way. Amkor, which claims to be the world's largest independent supplier of outsourced packaging and test semiconductor interconnect services, has turned its attention to the optical component market.
9. 40 Gbps products, including detectors, lithium niobate modulators, GaAs Mach-Zehnder modulators, electro-absorption modulators were available, but demos of polarization mode dispersion compensators were lacking.

The industry has **certainly come a long way since Donald Keck wrote "Whoopee!"** in a lab notebook in 1970 upon measuring sufficiently low attenuation in a piece of optical fiber under development that made long haul optical communications practical. Now we have seen **signs analogous to binge eating** after a starvation diet, with indications that we are now moving into the purge stage. In a sign of the times, JDS Uniphase's goodwill now exceeds its market capitalization -- a reminder of better days when its mergers were made with more expensive stock. The investment community has recognized that **earnings matter**, and IPOs are likely to be supplanted by mergers, acquisitions and restructurings. **Buyers and sellers must be more creative.** Buyers' currencies are less relevant now and many sellers are drawing down reserves. Funding appears to be finding entrepreneurs who deserve it, but often at step-down valuations.

Another concern: JDS Uniphase introduced 70 new products at the show, highlighting the lack of standards and the idiosyncratic nature of the technologies, products and applications. Clearly, **service providers do not want to deal with hundreds of component vendors**, and we question (1) how the number of product introductions will scale with time and (2) how manageable that inventory will be. The integrators are beginning to offer attractive solutions here and they bear watching.

For the public optical component providers, the bad news was that they are obvious targets for the army of private companies moving forward with the productization of innovative technologies, coupled with the carrier spending slowdown and automation advances. The good news for the public vendors is the **current funding slowdown may offer breathing room** and less expensive acquisition opportunities. While we remain optimistic on the group in the long run, we remain cautious in the near term until the fog lifts on carrier spending.

 This Past Week at Epoch

- 3/26/01 [Manugistics 4Q Earnings Results: Shining Bright](#)
- 3/26/01 [Cisco: Oh, How the Mighty Have Fallen](#)
- 3/26/01 [Reflections on the CTIA Trade Show](#)
- 3/26/01 [Vicinity: Buy... Sell... What's the Big Deal?](#)
- 3/27/01 [Ciena: Take Some Money Off The Table](#)
- 3/27/01 [Not Surprising Anyone - Nortel Lowers 1Q01 Guidance](#)
- 3/27/01 [Optical Component Companies May Brush off Nortel Announcement](#)
- 3/27/01 [Handspring Outlook Not So Rosy](#)
- 3/29/01 [Pivotal: One Less Competitor?](#)
- 3/30/01 [Foundry Filing: Pricing Pressure Could Rear Its Ugly Head](#)

Heard on the Desk

Compiled by the Epoch Partners Equity Capital Markets Team

Digging Deeper Provides Evidence of Dollar Cost Averaging

Looking at the stocks that saw the largest increase in holdings over the week ending March 23, we find that the **software sector** again **continues to attract** retail investor interest. With the Nasdaq's continuing decline, it will not come as a surprise to find out that nine of the top ten stocks bought were trading at their 52-week lows. On a slow week for news specific to any of the companies, we will **dig a little deeper into the numbers** to find out who is buying at these levels.

Niku Corporation (Nasdaq: NIKU, \$3.00) led the list by gaining almost 11% over the week. The provider of Internet software to help companies automate business processes has lost 68% of its market value in the last six months, but has increased its holdings by 29%. While the actual number of holders of Niku has only increased by 9%, the average position held has gone up by 20%. This trend demonstrates that **existing investors are adding to their positions** and lowering their cost basis.

Packeteer (Nasdaq: PKTR, \$3.13), an Internet infrastructure software company, has displayed a similar pattern. Over the last six months, the stock has lost 37% of its value. Even though the number of holders of the stock has increased by only 9%, the **average position held has gone up by 25%**.

The **most glaring example** of this trend has been demonstrated with Digital Island (Nasdaq: ISLD, \$1.63). The provider of managed Internet infrastructure services has **lost 88% of its market value** over the last six months. While the number of holders of Digital Island has actually decreased by 2% since late October, the average position held has gone up by 52%.



Company Highlight -- Ciena

Nasdaq: CIEN

Investment Thesis

Ciena may be the strongest vendor in the optical systems sector. Bucking the recent slowdown in the industry, it boasts solid growth, high-profile customers, insightful management, and a pure product line unencumbered by legacy equipment. Its optical transport and switching solution is one of the most comprehensive and includes leading products for the burgeoning optical switching and metro markets. Macroeconomic weakness and a valuation contraction in the sector limit near-term upside. However, Ciena has what it takes to make long-term investors smile.

Company Description

Ciena sells multiplexing systems that increase the capacity of long-distance fiber-optic telecommunications networks. The company is expanding its products and geographic breadth as it morphs from niche-market specialist to optical-networking supplier.

Key Investment Points

- While optical systems vendors have complained of delayed deployments by carriers, Ciena has been bucking the trend, proclaiming better visibility than ever and a strong lead in the critical optical switching sector
- We believe Ciena has visibility to make our fiscal 2Q estimate, but even this WDM pioneer cannot escape a prolonged macro slowdown. Our sensitivity analysis of industry growth and market share calls management guidance into question if the industry doesn't turn around in 2H01. Read [our analysis](#).
- We would encourage Ciena investors to be selling into strength. Shares trade at a premium to comps due to the current tone of business, but upside is unfortunately hampered by relative weakness in comparable valuations.
- Strategic Risks Created by Talus Acquisition. For Manugistics' enterprise profit-optimization strategy to succeed, three things must happen. First, Talus must be organizationally integrated into Manugistics. Second, the Talus solution must be converted from a services sale to a software sale. Third, Manugistics' customer base must embrace the integrated offering.
- Our long-term thesis remains positive based on Ciena's customer depth and product technology.

[Click here for full coverage of Ciena.](#)

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 2. Epoch Securities, Inc., has been an underwriting manager or co-manager of the company in the last three years.
 3. The analyst(s) involved in the preparation of this report has an investment position in the subject security.
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