

# The Net Economy

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## Tellium, Innovance Integrate Switching, Transport

By [Joe McGarvey](#)

**The combination of DWDM transport and wavelength switching is said to cut costs, despite past 'godbox' failures.**

Integration in the telecommunications space is a tricky business.

In some cases, like Sonet ADMs and digital crossconnects, fusing functions into a single network element seems to make sense. When you start talking about intermingling multiple functions, especially packet switching and transport, however, expect to be shouted down with accusations of building a godbox.

But if carriers and service providers are ever to be inclined to use equipment that integrates multiple functions, now is the time. Without a doubt, the biggest lure of network integration is its potential to reduce both capital and operating cost. It's easier and less expensive, after all, to manage and maintain one box than two or more.

An integration trend that carriers will likely swallow is happening in the core of the network as optical-equipment makers bring together DWDM transport and wavelength switching. Yesterday, startup Innovance Networks announced the general availability of its AgileCore suite of switching and transmission products.

Company officials boast that, by adopting their technology, service providers can save more than 70 percent in capital and operational cost over existing systems. The major savings, they say, come from eliminating expensive equipment necessary to convert optical signals to electronic ones and back and by reducing the complexity of conditioning and provisioning an optical channel.

"In today's network, the thing that takes the time is wavelength engineering," says Peter Allen, president and chief executive at Innovance. "We've created a way to do that in a point-and-click manner. The wavelength can be set up in an instant."

Another component in Innovance's portfolio, the Tunable Photonic Gateway, uses tunable lasers to ensure that a wavelength can be quickly assigned a new frequency if a blocking issue occurs at one of the optical nodes.

Another company touting potential savings from fusing optical and transport gear is Tellium. The optical switching company yesterday announced that it had completed a year-old joint effort with NEC to integrate its Aurora switch with the Japanese giant's DWDM gear.

Under the agreement, NEC has added transponders for its DWDM systems to Tellium's optical switch. The major advantage of that is that it eliminates a set of transponders normally need to terminate the signal from the DWDM box and send the wavelengths on to the switch. In addition to reducing costs, the integration lets network engineers manage separate pieces of equipment as if they were a single device.

"Mostly, it reduced footprint and power consumption," says Harry Carr, CEO of Tellium. "Instead of two separate network elements, you're effectively managing only one." Acknowledging that the combination will appeal most to users of NEC's DWDM gear, Carr says Tellium is considering

deals with other DWDM companies.

Though he would not release the names of other partners, he said it would take about a year for Tellium to integrate its switch with the gear of another DWDM equipment maker. Customers will influence the decision of which players to partner with, Carr says. Tellium's customers, he says, are extremely interested in an integrated transport-and-switching system.

Carr added, however, that carriers would prefer a multivendor approach, such as Tellium and NEC, compared to an integrated system from the same manufacturer. In addition to Innovance, Ceyba and Corvis offer integrated transport-and-switching systems.

By working with multiple DWDM makers, says Carr, Tellium offers service providers the flexibility to mix and match best-of-breed switching and transport. As is the case with all integrated products, the overall system's performance is only as good as the weakest link. A single-vendor system means that the transport system must be paired with the same vendor's switch.

Tellium's switch is also different from Innovance's in that it uses an electronic switch fabric. The Innovance product is based on all-optical switching technology.

In the end, says Carr, what matters to service providers right now is cost. "At the end of the day, it's all about reducing operating expenses," he says.