



## CASE STUDY

### Innovative Indonesian ISP Turns to LightPointe for High-Bandwidth Optical Wireless Connectivity

#### *FSO Deployment Allows IPTK to Deliver New Level of Service to Customers*

A young company with big ambitions, PT.IP Teknologi Komunikasi (known as IPTK), is aiming to become Indonesia's leading provider of Internet Protocol (IP) solutions by offering the region's most advanced voice, data and video services. Formed in 2002, the fast-growing 25-person Jakarta-based company is dedicated to providing its customers, which include consumers, businesses, Internet Service Providers (ISPs) and TV cable operators, with high-bandwidth, high-reliability solutions for data and voice over IP (VoIP) telephony services as well as online interactive gaming, IP-based video conferencing and video-on-demand services.

IPTK's fast-paced growth has required the acquisition of additional office space for a new state-of-the-art data center. While the new facility is only 1 kilometer from the Indonesian Internet Exchange (IIX), there is a busy six-lane highway and another six lanes of road between the two sites. As a result, IPTK's challenge became finding a cost-effective and easily deployed solution for achieving high-speed connectivity between the two facilities, without suffering any security or bandwidth constraints.

#### THE CHALLENGE:

When IPTK's IT staff began researching options for connecting the two buildings, they initially considered a 2.4 GHz WiFi bridge. However, they realized that a radio frequency (RF) solution wouldn't provide sufficient bandwidth and was susceptible to interference which posed a big problem for network availability—also known as uptime. Running fiber was ruled out because of the 12 lanes of thoroughfares separating the

two buildings. In connecting its two locations, IPTK was seeking at least 100 Mbps connectivity speeds with the lowest latency, no interference and highest uptime available.

*"With LightPointe, we now have a new point of entry to this most valuable level of connectivity. The simplicity of deployment was impressive. The successful installation is definitely in line with our long-term goal of providing secure Internet access as well as an improved email delivery system."*

Eddy Murtidjaja | CEO  
IPTK

IPTK then turned to optical wireless based on free-space optics (FSO) technology. While optical wireless bridges have gained market adoption around the world as excellent transport for high-capacity bandwidth through the air on beams of light, IPTK was hesitant to consider



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the technology. Its IT team was under the impression that optical wireless was not only expensive and difficult to deploy, but also fragile to maintain. Nevertheless, with their options running out, IPTK evaluated FSO solutions from three companies: LightPointe, Laserbit and PAV Data. The last two vendors quickly were eliminated, as it became clear their products did not provide the sophistication, features and benefits that IPTK needed. LightPointe, an FSO pioneer with 2,500 installations in more than 60 countries, offered a broad portfolio of optical wireless equipment with carrier-class products yielding bandwidth from 1.5 Mbps to 2.5 Gbps. In addition, LightPointe's connectivity solutions have proven to be extremely cost-effective, delivering the best price-per-port on the market while also eliminating latency, reliability, and interference and security concerns.

### THE SOLUTION:

IPTK determined that LightPointe's FlightLite™ 155E, with 100 Mbps of bandwidth, would best meet its building-to-building connectivity requirements. The system would deliver 65 times the bandwidth of T1 links and approximately 17 times the bandwidth of WiFi—a substantial improvement over the other alternatives IPTK considered. In addition to the best-selling FlightLite line, LightPointe also offers FlightSpectrum™ with fixed four-beam operation; FlightStrata™, its flagship product with advanced multi-beam tracking, optical beam shaping and speeds up to 1.25 Gbps; and the FlightApex™, the highest-capacity optical wireless product on the market with multi-beam technology and connectivity speeds up to 2.5 Gbps for combined voice, data and video applications.

In mid-2004, IPTK installed a pair of FlightLite optical wireless links. The rooftop-mounted units each consist of an optical transceiver with a laser transmitter and receiver to provide full-duplex communications. Installation, performed by IPTK staffers, was completed in less than a day with guidance from a LightPointe technical engineer, who also trained the team on system operation in a matter of hours.

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Eddy Murtidjaja | CEO  
IPTK

According to Eddy Murtidjaja, CEO of IPTK, the FlightLite 155E was up and running almost immediately, transparently transferring data across Jakarta's busiest roadways while preparing IPTK to meet its escalating IT challenges as the new data center evolves. “With LightPointe, we now have a new point of entry to this



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most valuable level of connectivity,” said Murtidjaja. “The simplicity of deployment was impressive. The successful installation is definitely in line with our long-term goal of providing secure Internet access as well as an improved email delivery system.”

### THE BENEFITS:

Since implementing the LightPointe system, IPTK has enjoyed broadband connectivity with 100 percent uptime at its new facility. Once concerned about the reliability, IPTK has found FlightLite to be extremely robust. In fact, Murtidjaja says the LightPointe equipment has performed flawlessly, letting IPTK deliver a new and elevated level of service to its customers.

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### CUSTOMER:

PT.IP Teknologi Komunikasi (known as IPTK)

### INDUSTRY:

Music/Entertainment

### CHALLENGES:

- New data center and escalating customer demands drove need for high-bandwidth connectivity with Indonesian Internet Exchange.
- Fibre was not an option due to established urban environment.
- RF solutions resulted in too much interference.
- WiFi bridges delivered insufficient bandwidth and caused security concerns.

### SOLUTION:

- LightPointe FlightLite-155E optical wireless bridge

### BENEFITS:

- Eliminated security, interference and latency concerns.
- Delivered 65 times the bandwidth of T1 and approximately 17 times the bandwidth of WiFi.
- Provided best price-per-port on the market for Ethernet-class connectivity.
- Enabled IPTK to deliver a new, higher level of service to customers and gain a competitive advantage.