



The Customer

North-Hungarian Water Conservancy Directorate

- Territorial organ managing water supplies**
 - Operates on 10290 km² on the watershed frequently flooded area (~meters a day), where live **more than one million** people
- Protecting environment & citizens**
 - Maintain **efficient & secured** communications between Disaster Recovery Centers and Water Directorate during flood & normal operations

The Challenges

Improve existing backhaul with safe and long distance wireless connections

- Creating a safe and technically advanced water management environment**
 - Need for **reliable & long distance** connections to provide communications network operation, router management and flood monitoring system
 - Carrier grade requirements** for high priority data, voice and video service transmission
 - Convert existing leased lines as a backup
- Using the existing and mechanically limited telco towers and crowded cabinets & racks**
 - The 'Antenna size' vs 'Mast load' equation

The Solution

A robust microwave backbone to deliver voice, data and video for water surveillance

- High profile Network for Flood Prevention, Protection and River Management**
 - A **turnkey solution** provided by NEC's channel partner, SCI-Network Inc. : radio planning, installation & commissioning, operation and maintenance.
 - The backbone consists of three 11 GHz links, relatively long - 44, 35 and 25km - with capacity of 100Mbps
 - Connect High available LAN Networks and provides high capacity multiservice traffic (VoIP, data, video)
- High performance iPASOLINK 100E Microwave radio**
 - NEC High Power & Small Outdoor Units allow long distance links with **drastically reduced antenna size & weight**: 2 feet dish instead of 4 feet on most of sites
 - High capacity with Quality of Service for diverse traffic
 - The iPASOLINK 100E perfectly fits in 'crowded' telco racks thanks to its unique compact size Indoor Unit
 - Fan-less cooling : silent operations & power savings

The Results

A satisfied customer relying on high available & safe microwave backhaul for critical operations

- Very high availability 99,999%** during heavy rains and flood disasters for preventive & immediate actions
- Cost effective solution** due to **scalability up to 400Mbps** by software upgrade only
- Fixed SLA Maintenance contract**
 - NEC Microwave reliable solutions and SCI-Network trusted experienced partner for a **Successful and Sustainable Mission Critical Communications** project

Technical & Business Benefits

iPASOLINK 100E – Ultra Compact and Performant solution for Reliable Long distance links

- High Reliability & Availability**
 - Highest MTBF in Industry
 - Yearly 99,999% Availability - Leased Lines as backup for the remaining 5 min of the year!
- Sustainability & Scalability**
 - Triple, Quadruple the capacity without changing hardware – Invest for the future
- Unify and Consolidate with One infrastructure**
 - By optimizing the rich QoS features, predict, organize and secure the traffic based on SLA
- Reduce the OpEx**
 - High Power iAP ODUs (+5dB from normal ODU) : reducing antenna size not only gives Infrastructure cost savings but also reduce loads on sites for better safety
 - Low Power consumption with FAN-less natural cooling Indoor Units
 - Do not invest in racks: thanks to compact iPASOLINK 100E with half the competition Indoor Units size – Can be installed everywhere, even on a desk!

