Get the benefits of a non-profit local/sub-regional IX

BIX – Budapest Internet Exchange

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Peering Manager

Janos Angeli (Angelo)
Chief Technical Officer

Peering Days
24/03/2026
Bologna, Italy

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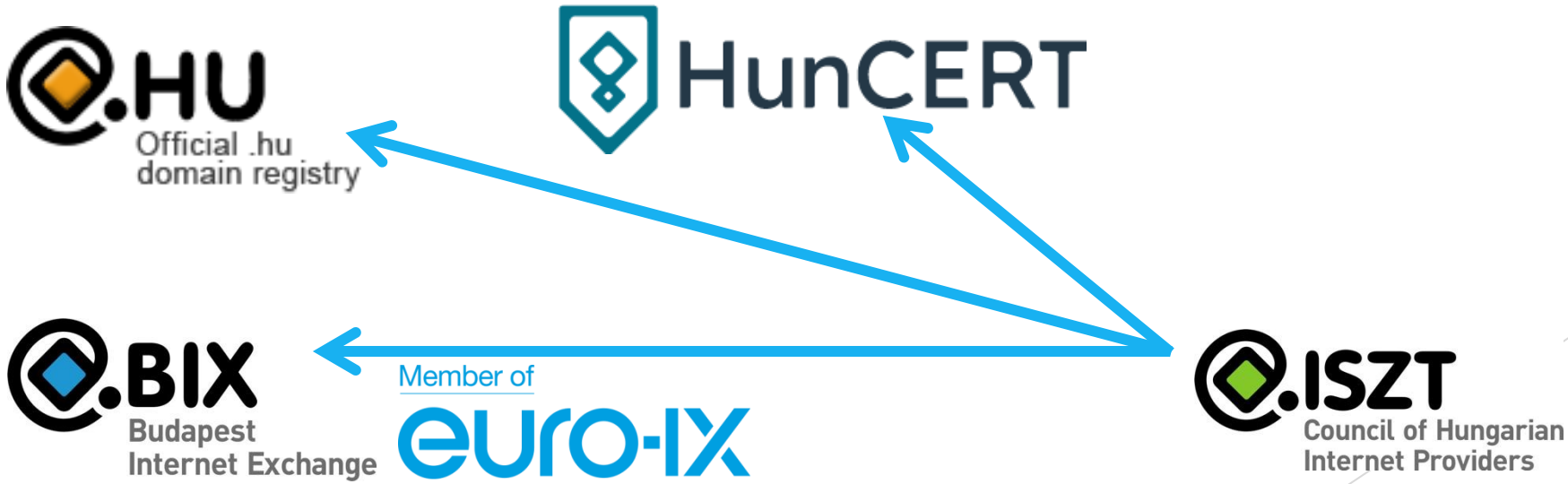
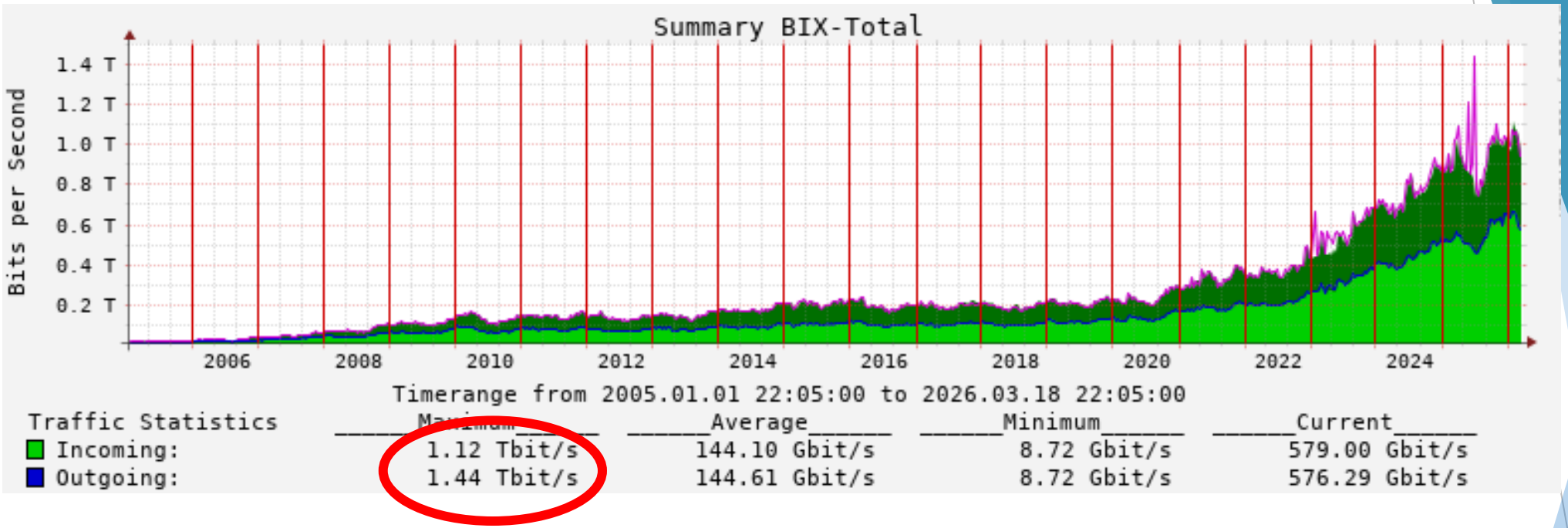
ISZT Council of Hungarian Internet Providers

Council of Hungarian ISPs

- Founded in 1995
- Non-profit organization
- **100% owner of BIX - Budapest Internet Exchange**
- .hu ccTLD top level domain registration
- Organizer and founder of HUNOG
- **One of the hosts of Peering Days conferences**



BIX - 20 years traffic history



- Budapest PoPs (Victor Hugo DC, Telekom DC, 2connect DC10)
- Vienna PoP (Digital Realty – VIE1)
- *Frankfurt PoP (Digital Realty FRA8 & Equinix FR5)*

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What do we focus on?

- Traffic growth
- Competitive conditions, burst options (1/10G; 4/10G; 10/100G; 40/100G)
- Cost based pricing models
  - free peerings up to 2G
  - steadily falling prices
  - MRC free cross-connets
- Technology driven network development (up to 400G)
- Customer and traffic focused services (PNI support, VLAN, MMR)
- **Supporting CDNs and ISPs to join BIX!**

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What does it mean in practice?

- PEERING in Budapest, Vienna, Frankfurt DCs
- HU, SRB, BOS, RO, CRO ISPs and hosting providers
- CACHE server support
- CONNECTING to BIX members via BIX MMR and VLANs
- HYBRID ports, PNI support

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Responsibilty & Support

for our community &
for the internet ecosystem

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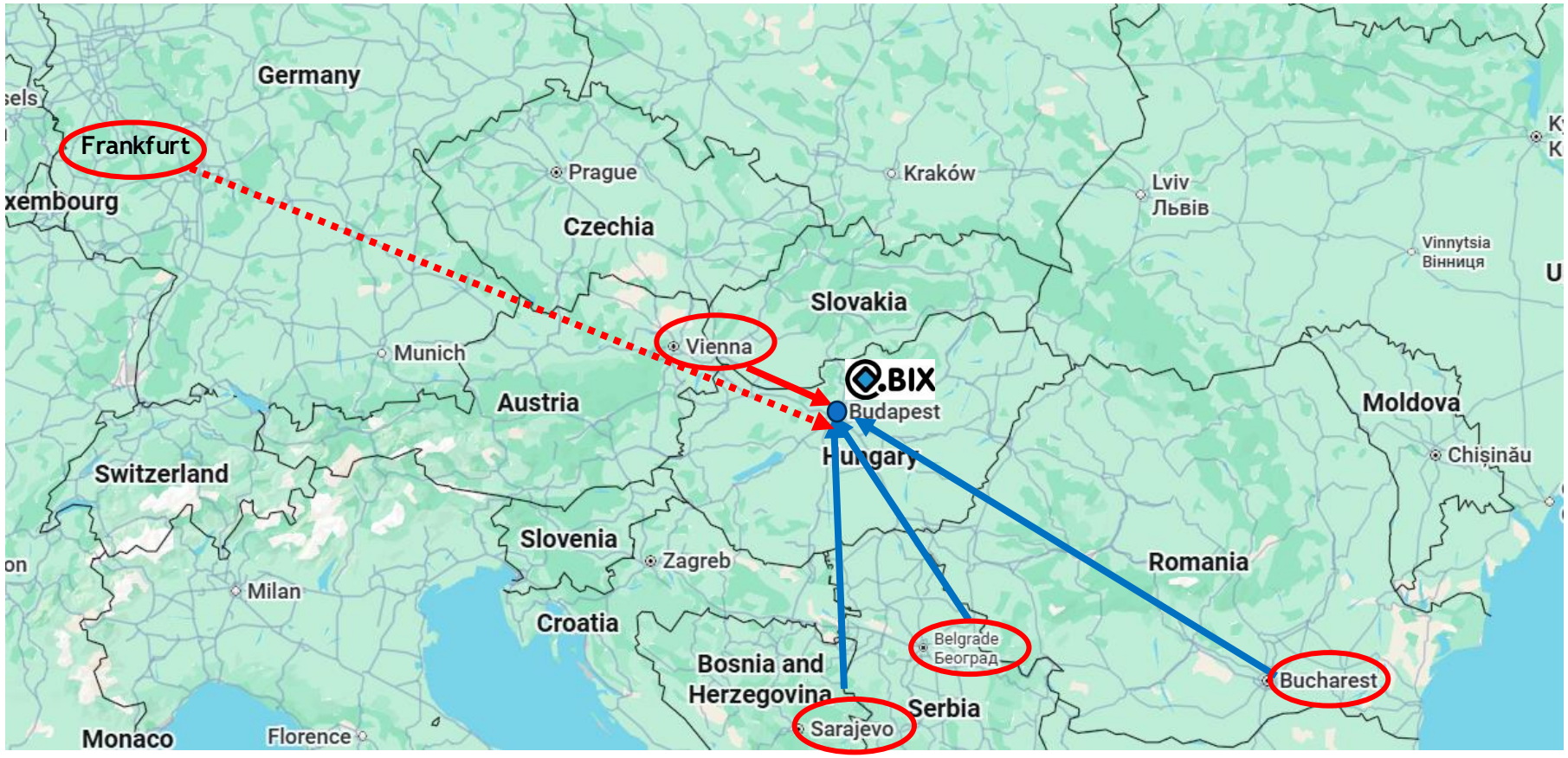
IXP traffic depends on…
(geolocation,infrastructure,community,…)



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Technical Background

a quick overview of our locations & backbone network

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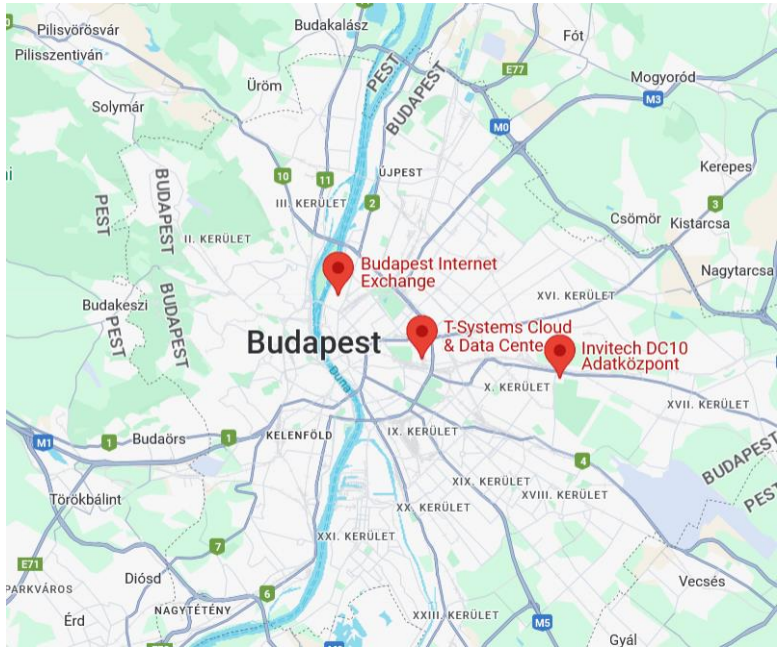
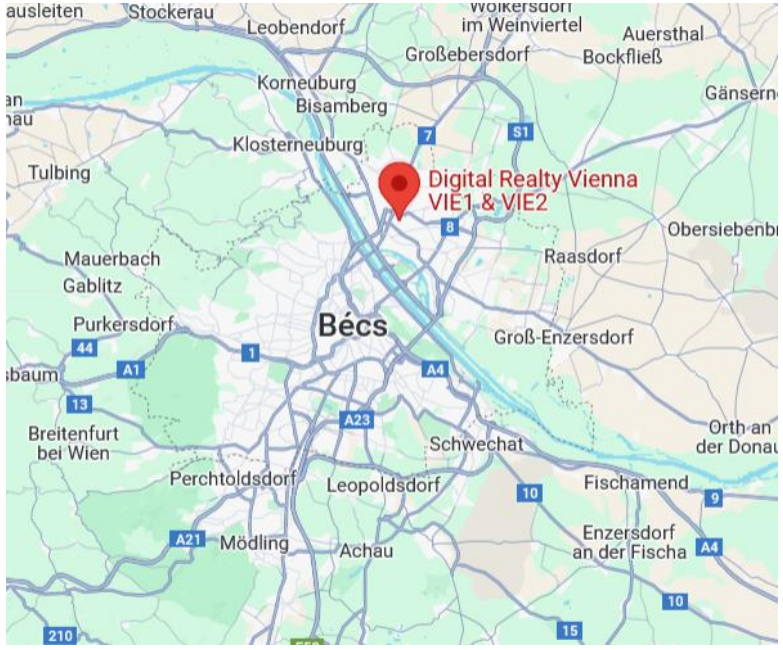
BIX locations (POPs)



- BIX / VH / Victor Hugo street
  1132 Budapest, Victor Hugo u. 18-22.
- Dataplex
  Telecom Cloud & Datacenter Budapest
  1087 Budapest, Asztalos Sándor u. 13.
- 2Connect DC10
  1108 Budapest, Kozma u. 2.



- Digital Realty (InterXion) VIE-1
  1210 Wien, Louis-Häfliger-Gasse 10

- Digital Realty (InterXion) FRA-8
  60314 Frankfurt am Main,
  Weissmüllerstrasse 36.
- Equinix FR-5
  60326 Frankfurt am Main,
  Kleyerstrasse 90.

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Informations about BIX network

- VXLAN based Layer2 peering LAN
  - Layer3 IPv4 underlay with OSPF routing
  - BGP EVPN control plane for Layer2 VNIs (VLANs)
  - Spine devices are the BGP EVPN Route Reflectors
- Compact 1/2U Nokia & Arista routers / switches
- Bird v3 route servers (BGP route reflectors) for the peering LAN
  - You can get almost all Hungarian prefixes via the route servers
  - RPKI & IIRDB prefix filtering
- No traffic shaping on physical ports – spare capacity is a good thing
  - Backup / spare / subspeed (ex: 1/10G, 40/100G) ports for a discounted fee
  - 95th percentile billing model when You have backup or subspeed ports

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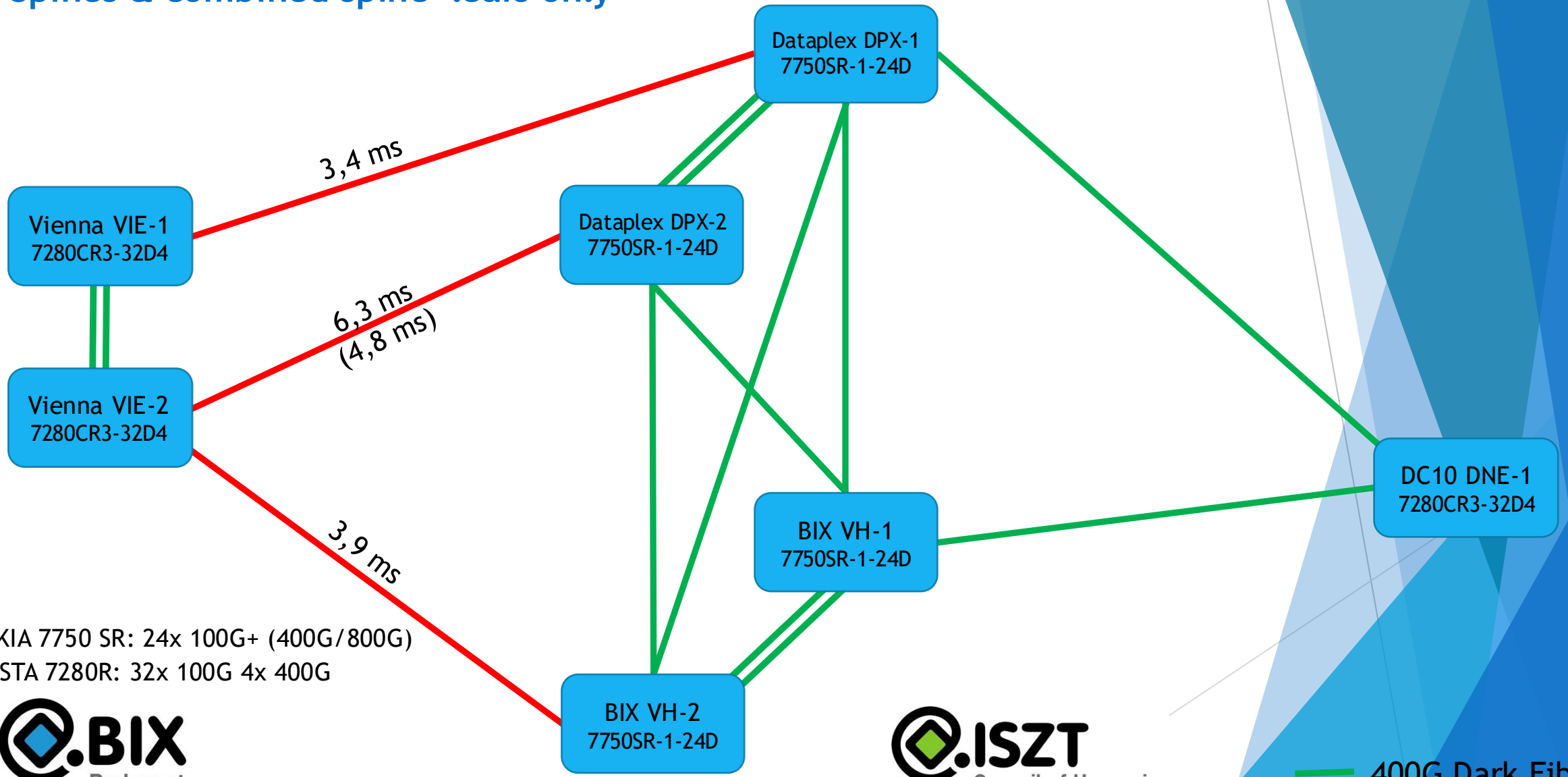
Current BIX backbone

Spines & combined spine+leafs only



NOKIA 7750 SR: 24x 100G+ (400G/800G)
ARISTA 7280R: 32x 100G 4x 400G

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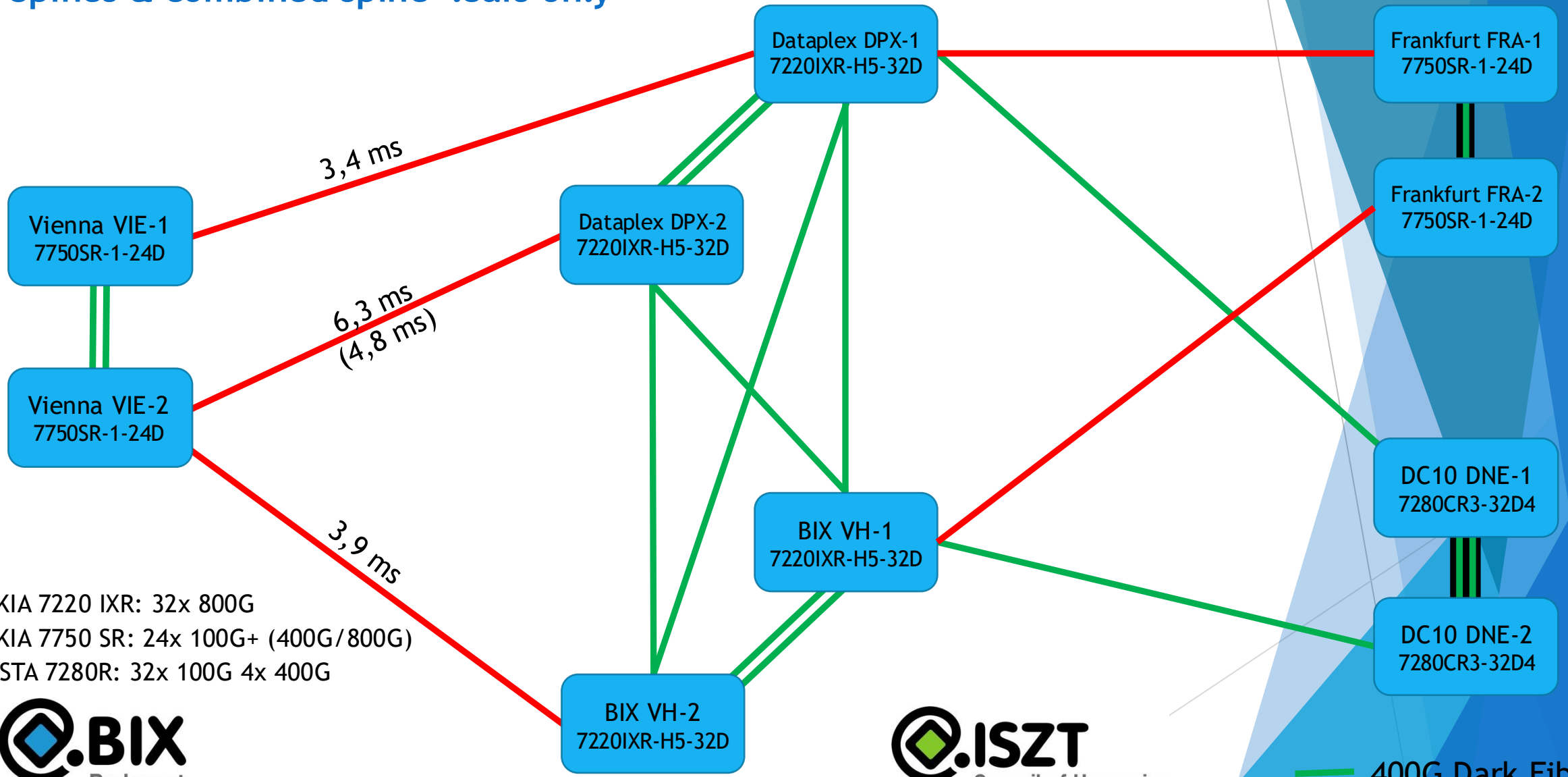
400G Dark Fiber
400G Wavelength

BIX backbone with changes in 2026

Spines & combined spine+leafs only



NOKIA 7220 IXR: 32x 800G
NOKIA 7750 SR: 24x 100G+ (400G/800G)
ARISTA 7280R: 32x 100G 4x 400G

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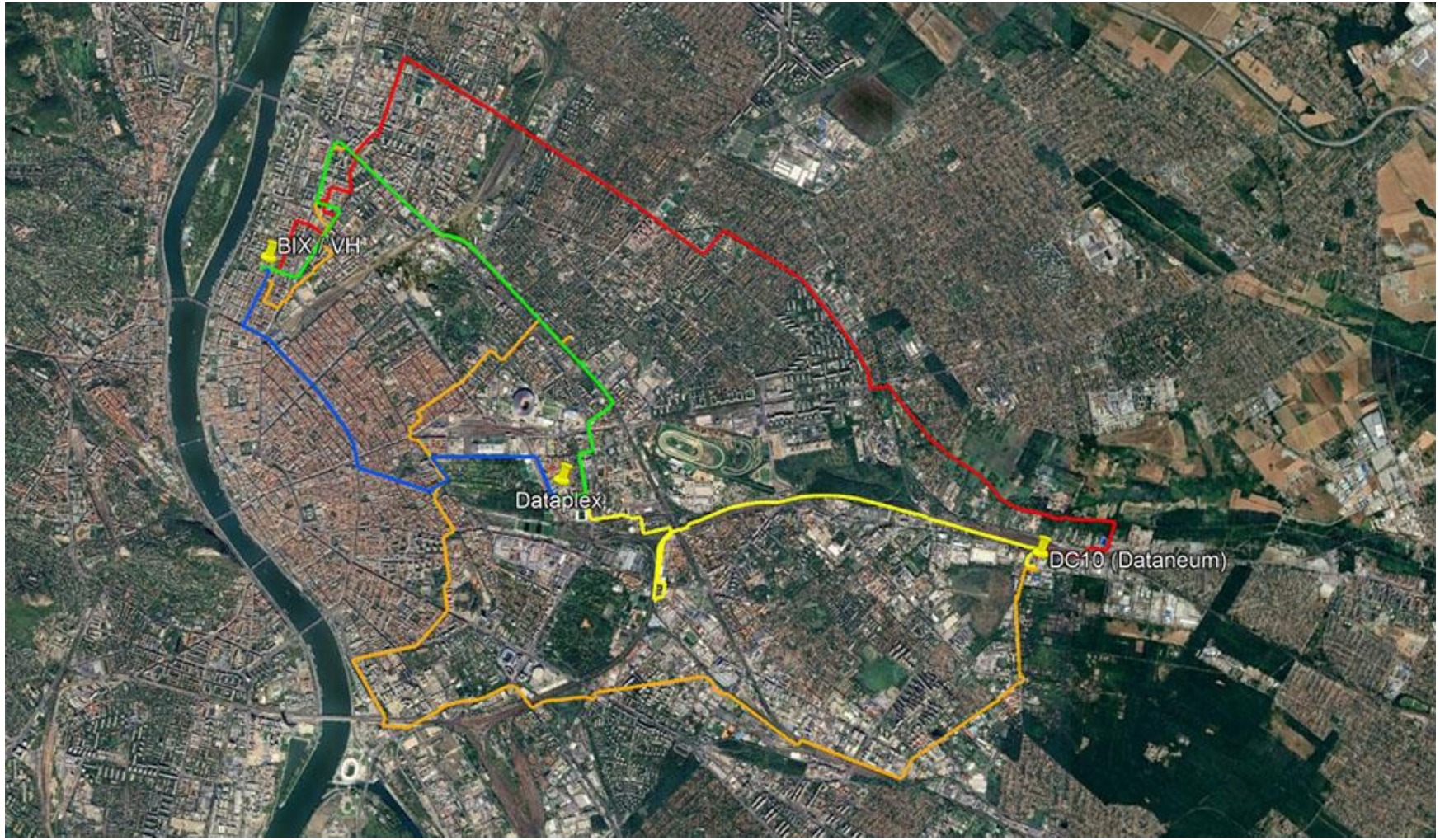
Budapest Dark Fibers



- VH - DPX #1
  ~7km (IRU)
- VH - DPX #2
  ~10km
- DC10 - DPX
  ~10km
- DC10 - VH
  ~28km → ~18km

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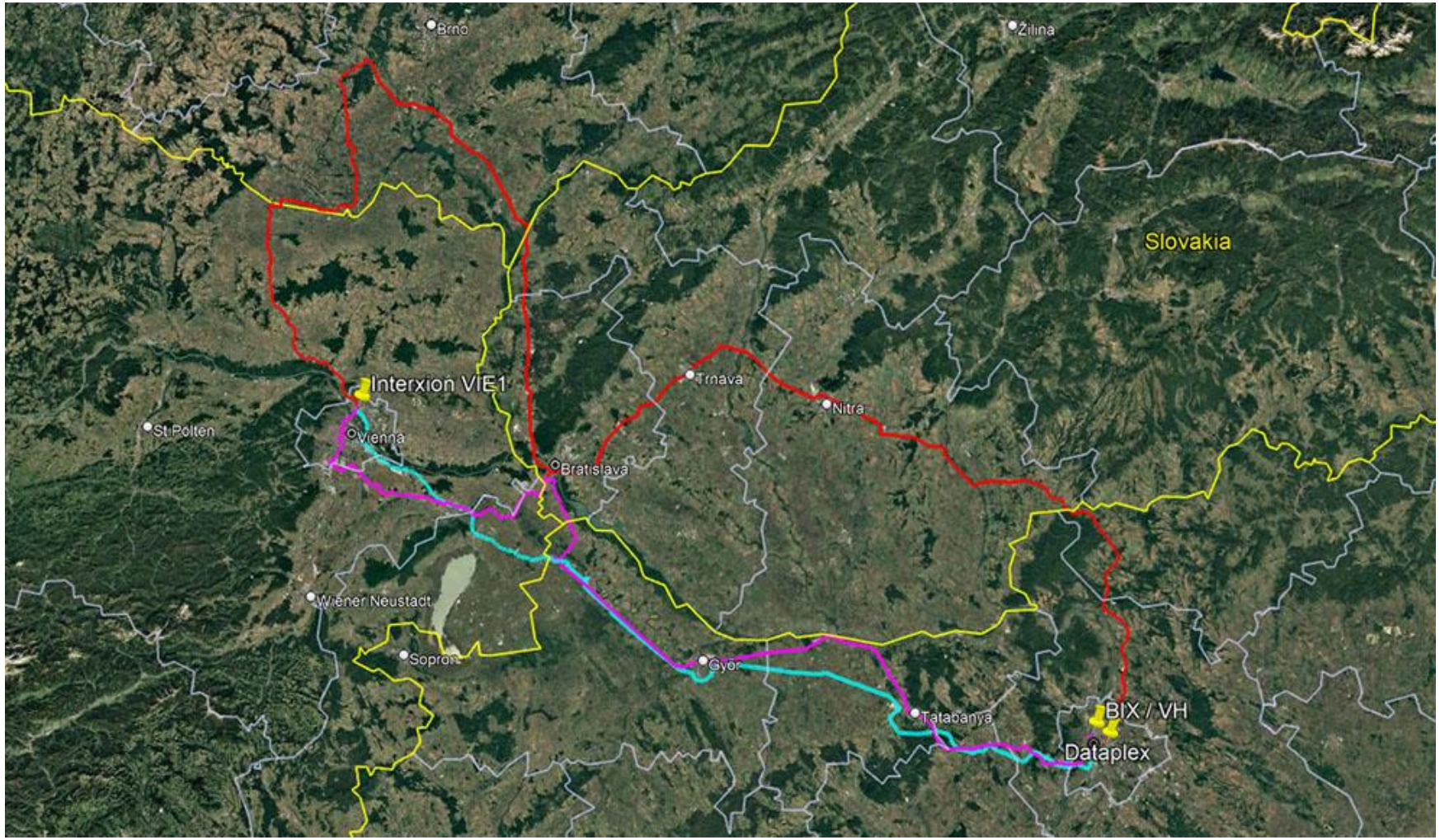
Budapest - Vienna Wavelengths



- 400G #1
  3,4 ms
- 400G #2
  3,9 ms
- 400G #3
  6,3 ms / 4,8 ms

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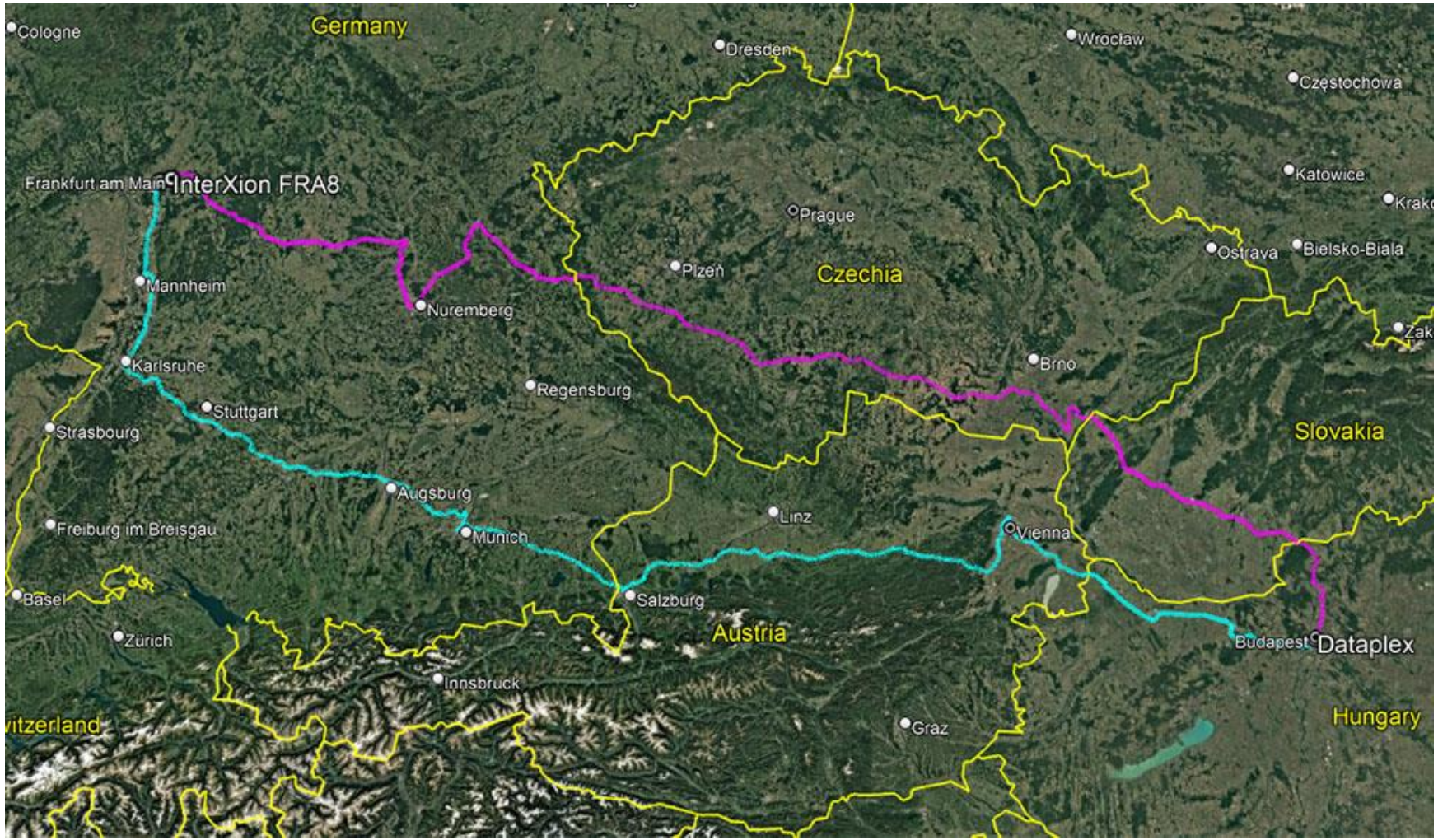
Budapest - Frankfurt Wavelengths



- 400G #1
  ??? ms
- 400G #2
  ??? ms

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Thanks for Your attention!

Have a nice peering! ☺

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