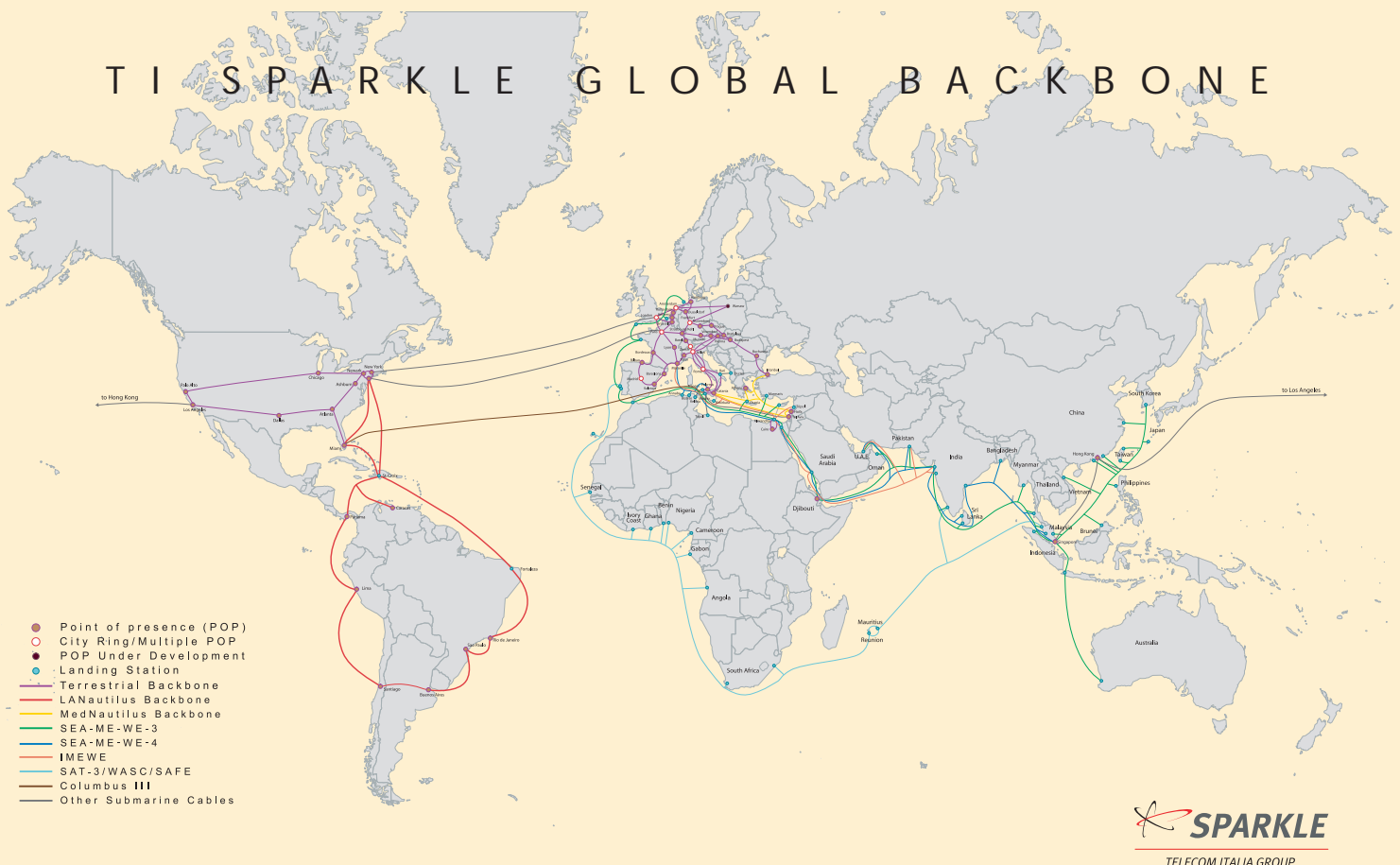**Transitioning to IP provides a means for operators to achieve greater flexibility in introducing innovative services while at the same time achieving cost efficiency. However, the path to IP presents a series of challenges to operators. Telecom Italia Sparkle explains how its new IPX proposition, which represents a step forward from IP transitioning, addresses these challenges and enables service providers of all types to transport voice and mobile data services through a single IP connection and, at the same time, guarantees high quality and security levels**

IPX approach delivers operational flexibility, new service capabilities and guarantees premium quality and security levels

There are an increasing number of reasons for operators to migrate to IP both in terms of achieving cost efficiencies in their businesses but also in enabling them to bring new propositions and services to market rapidly and effectively. In Telecom Italia Sparkle's view there are a series of dynamics behind this. Operators face the need to manage IP-based services that are increasingly being offered at retail level and therefore their future introduction in the portfolios of international operators will need to happen more rapidly by using a single and integrated network transport infrastructure. IP technology offers high levels of flexibility and at the same time allows operational and capital expenditure reduction. In addition, vendor strategy

seems to be more and more focused on pushing the market towards IP solutions and technology as the industry recognises the value of transitioning to IP for the effective introduction and management of future services. Adoption of IP technology translates therefore into higher operational flexibility, faster time-to-market, cost efficiency and it is a future-proof technology.

Telecom Italia Sparkle has been running a full IP softswitch multi-service network since 2004 with global MPLS capabilities and is a co-founding member of the i3 Forum, an independent industry alliance created to promote industry-wide transition of voice and related services to IP. Telecom Italia Sparkle is among the first operators to successfully

TI SPARKLE GLOBAL BACKBONE

Legend:
- Point of presence (POP)
- City Ring/Multiple POP
- POP Under Development
- Landing Station
- Terrestrial Backbone
- LANautilus Backbone
- MedNautilus Backbone
- SEA-ME-WE-3
- SEA-ME-WE-4
- IMEWE
- SAT-3/WASC/SAFE
- Columbus III
- Other Submarine Cables

SPARKLE
TELECOM ITALIA GROUP

migrate its bilateral traffic with the major global operators to IP and was one of the first service providers to design an IPX solution compliant with the i3 Forum and GSMA specifications.

The IPX concept — IPX stands for IP Packet eXchange — originally came about in response to mobile operator requirements to manage voice and mobile data services through a platform separate from the public internet, to address the need for interoperability in the IP environment, to ensure high quality and high security levels, all at the same time.

Stemming from a mobile industry-wide effort, the GSMA-developed IPX model identifies a next generation IP Interconnect network that is secure, supports cascading payments and multilateral connectivity and provides end-to-end quality of service for multiple voice, video and data services. The fundamentals of IPX include, therefore, high levels of quality and security to participants thanks to a set of private IP interconnection requirements that are being recognised by the industry. IPX provides a means for providers to ensure a high quality user experience that is secure and free of spam as IPX networks are based on private means of interconnection for operators. IPX allows seamless interconnection between operators of all types, it has the ability to carry different types of traffic and enables operators to add new services easily.

Telecom Italia Sparkle has been a pioneer in recognising the value of IPX and with its new proposition, TI Sparkle intends to consolidate its positioning as enabler of this voice and data convergence trend on a single platform and wants to address increasing operator demand for efficient and integrated platforms and interoperability. In addition, the IPX proposition enhances Telecom Italia Sparkle's portfolio of services as with the future evolution of the IPX ecosystem it will allow TI Sparkle to increase market penetration in terms of new customers, especially mobile operators, but in the future also media and content providers which will be demanding more and more advanced solutions based on up-to-date technologies.

Today TI Sparkle offers an IPX solution devised for both fixed and mobile operators and able to support existing and next-generation IP-based services. Through a single, converged interconnection, TI Sparkle's customers can access high-quality voice and mobile data services such as GRX evolution, Signaling services, SMS Transit/Hubbing and other innovative services will include Instant Messaging, Presence and Videoshare amongst others (Mobile IPX). TI Sparkle's IPX platform is able to support the development of new IP-based services and to guarantee a high level of interoperability with a worldwide reach between various service providers.

Earlier this year, TI Sparkle and iBasis announced the successful migration of their bilateral voice traffic to IP. The companies believe they were the first to accomplish full migration to IP of their international bilateral agreements in compliance with guidelines developed by the i3 Forum. Before completing their migration, both operators validated the implementation of premium voice services over managed IP interconnects in a series of extensive trials that proved that their solutions could effectively guarantee advanced call features including CLI, international roaming, ISDN data, fax and ISUPv2. ∎

Telecom Italia Sparkle network and services

Telecom Italia Sparkle is a global provider of wholesale voice, data, mobile data, IP services and retail solutions for multinational corporations (MNCs). A wholly owned subsidiary of Telecom Italia, the company was established in 2003 with the objective of developing the group's international wholesale and MNC businesses and to support group business units in their provision of international services. The company now has presence in the US, Latin American, European, African, Middle Eastern and Asia Pacific markets. It has worldwide presence in 40 countries and owns a state-of-the-art global network comprising three main regional proprietary backbones in Europe, the Mediterranean basin and Latin America. It also owns substantial shares in submarine cables connecting Europe to South East Asia, while TI Sparkle is one of the founding members of the upcoming IMEWE cable connecting India to Italy and France via the Gulf. The network comprises 122 owned PoPs and approaching 1,000 PoPs through partners extending from its 14,000km fibre network in Italy to 434,500km of submarine cables and regional backbone in Europe and the Americas. TI Sparkle has been ranked number one in Europe in terms of international voice revenues by analyst firm Ovum, and number five for worldwide voice traffic collected on an international basis by research firm TeleGeography. Its IP backbone Seabone is ranked number one in the Mediterranean and number three in Europe by Renesys and the company is one of the few global providers active today within the wholesale mobile market.

Uniquely, the company also recently extended its IP Backbone through the Balkans connecting Istanbul to Vienna and Bratislava with points of presence in Bucharest and Budapest. A new submarine cable linking Athens with Istanbul is due to be ready for service in the first quarter of 2011 providing customers with an alternate route from the Mediterranean to northern Europe.

TI Sparkle's global services portfolio comprises of four key product and service offerings, voice, IP and data, mobile data and corporate solutions and is supported by advanced OSS, BSS and customer care capabilities backed by multilingual call centres.

For more detailed information on TI Sparkle's products and services proposition and global capabilities please visit www.tisparkle.com