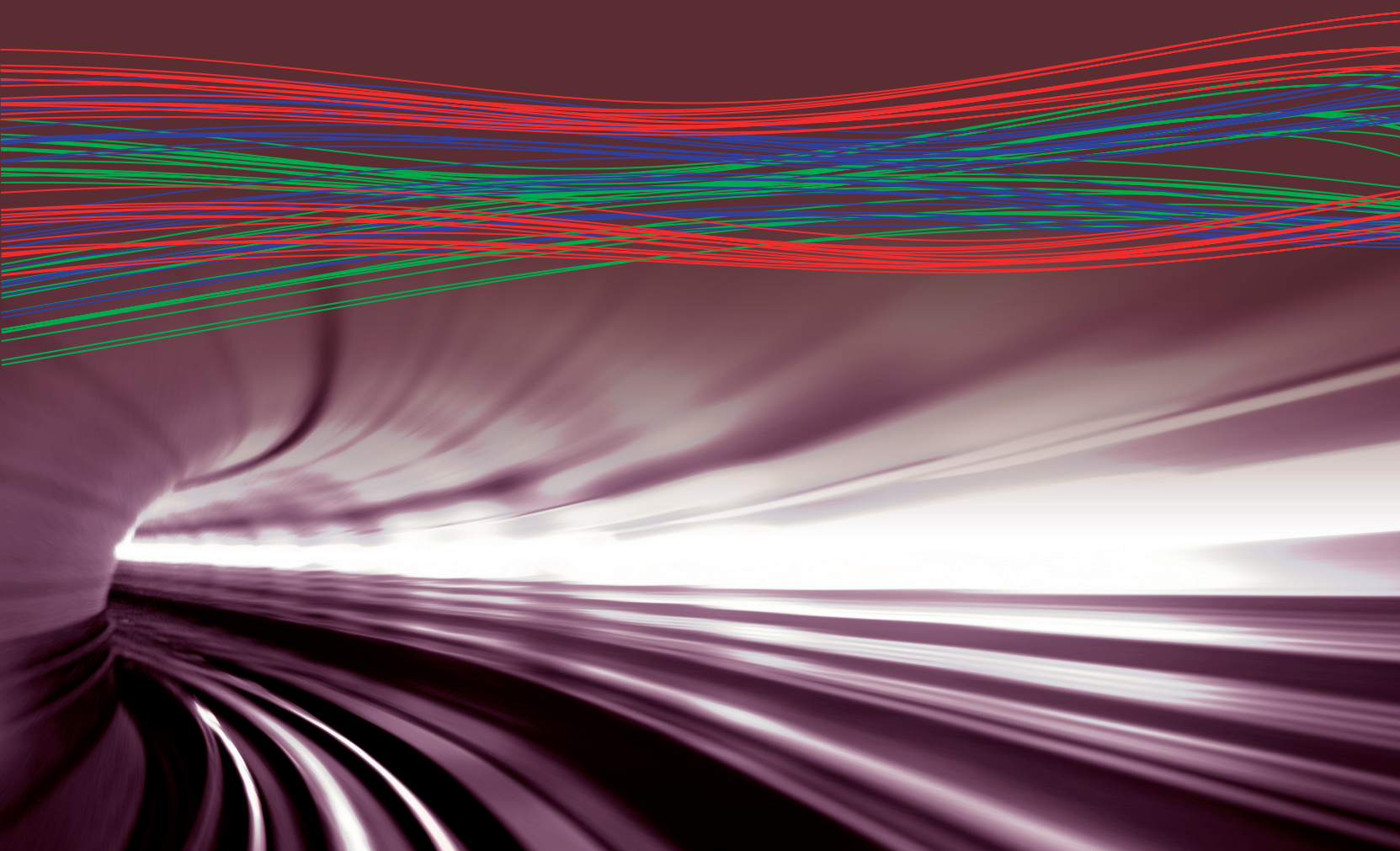


Network Services

SIANET.NG
The solution for the
whole financial industry



Network Services

SIANET.NG **The solution for the whole financial industry**

SIAnet goes Europe

Back in 1986, SIA-SSB deployed the Italian Interbank Network on its own network to pave the way to payment systems automation, allowing all the then existing Italian banks to be connected electronically. Following the automation of the Italian payment system, SIAnet has facilitated the automation of the trading activities on the Italian Stock Exchange first and the Government Bond Market MTS and the Interbank Money Market e-MID thereafter. Today, SIAnet manages 423 network connections to the Italian financial institutions and more than 169 connections to financial institutions in Europe, linking remote members in 22 countries to the above mentioned trading platforms.

SIAnet: the privacy compliant network

SIAnet guarantees full compliance with respect to the EU data protection directives 95/46/EC and 2002/58/EC and subsequent resolutions of the European Parliament requiring the European payment system to comply with the data protection laws. Thanks to its peer-to-peer architectural design that requires the financial institutions' intervention to access the transaction data stored on the equipment at the customer's premises, SIA-SSB cannot access or distribute the content of the transactions carried without its customers' formal approval.



SIAnet: the technological leadership

SIA-SSB addresses Straight Through Processing communication from trading to settlement of both cash and securities, offering network solutions for cards and trade finance. In order to address all these needs, SIAnet supports all the most common messaging standards, including: FIX, SWIFT MTxxx, RNI, ISO 20022 XML. SIAnet is a **state-of-the-art network** that exploits the full capabilities of the MPLS broadband technology, including the multi-protocol IP network functionalities.

SIAnet keeps evolving over time in a continuous quest for innovation, providing its customers with best of breed technologies and guaranteeing the highest performance levels in terms of reliability and availability. In 2007, SIAnet handled **over 10,300 billions bytes, with a 99.99% network availability**.

SIAnet: the solution for the whole financial industry

SIAnet means several different network services. These can be grouped into two main categories:

the **connectivity services** and the **messaging services**.

They are designed and managed according to the customer's business needs, addressing all the technical features required in the financial industry:

- :: high value and retail payments
- :: cards processing
- :: securities trading and settlement
- :: trade finance
- :: all the custom-designed services for the Bank infra-group network services.

SIAnet vision: a trusted solution to let business think business

The underlying vision for the messaging and connectivity services is to offer an **integrated approach**.

That means:

- :: an overall responsibility: covering provisioning, management, maintenance and continuous proactive monitoring
- :: a one-stop shop for the provisioning of all the SIAnet equipment needed
- :: a multi-carrier network to realize high availability solutions
- :: a single help desk for all the customer care requests
- :: full service management and

monitoring twenty4ever (24x365)
:: business continuity enabler.

In the SIA-SSB vision, continuous network availability, secure communication and full resiliency are the cornerstones for the proper functioning of the financial system, and thanks to SIAnet the financial institutions are relieved from the technological obligations of network set up and management.

SIAnet Domain: segregated services on a shared infrastructure

Multiple dedicated domains can be defined over SIAnet, allowing the creation for each domain of a segregated network, while the financial institutions can benefit from a single shared network infrastructure.

Each domain has its own rules and handles the appropriate connectivity and messaging services.

Services and membership are defined at domain master level. Examples of existing SIAnet Domains are: Italian Interbank Network, EBA STEP2, Interbank Corporate Banking, MTS, e-MID, Monte Titoli, Tlx, London Stock Exchange, Swift.

SIAnet for the financial industry

:: Payment Systems market

- > RNI
- > SEPA
- > IPC (Italian Public Administration)

:: Capital Markets market

- > MTS
- > LSE
- > e-MID

> HI-MTF

- > GLNet
- > FINESTWAY
- > Italian Auction
- > Monte Titoli

:: Cards market - National

- > Bancomat
- > PagoBancomat

:: Cards market - International

- > VISA
- > VISA Electron
- > MasterCard
- > Maestro
- > Cirrus
- > Amex
- > Diners

Connectivity services: an integrated approach

Concerning connectivity services in line with the SIAnet integrated approach, Banks will benefit from:

- :: a single network to reach the multiple business counterparties across Europe
- :: a single IT partner for the design of a customized network solution
- :: a single contract for the overall provisioning: bandwidth, routers, firewalls and switches
- :: a Disaster Recovery infrastructure to support the highest Business Continuity needs
- :: a guarantee of resilience in line with customer needs, enabled by a multi-carrier architecture and the possibility of redundancy for each component
- :: a highly secure network that also uses cryptography
- :: high speed and low latency
- :: an interoperable network (GL net, SwiftNet, Radianz and Bloomberg)
- :: a smooth bandwidth scalability (from 128KB to 10MB)
- :: a multi-protocol architecture to support both TCP-IP and SNA
- :: a flexible connectivity offering to support the most stringent disaster recovery and business continuity requirements.

SIA-SSB network expertise is provided to complement all the connectivity services with:

- :: full service management and monitoring end-to-end twenty4ever
- :: a single help desk for all customer care requests
- :: specialized consultancy for custom designed network solutions.

SIAnet: a reliable choice for Europe

SIA-SSB is **your reliable IT partner for the management of highly competitive network services**, taking care of all technical issues so you can concentrate on your core business. No need to worry about infrastructure and connectivity issues, **stay focused on business**. No need to worry about data confidentiality, get **the privacy compliant network**.

SIAnet Suite

The various network types, entirely based on IP connectivity and on the MPLS protocol, were designed with availability, functionality, scalability features and high security levels to respond to the customer's multiple and varied requirements, providing

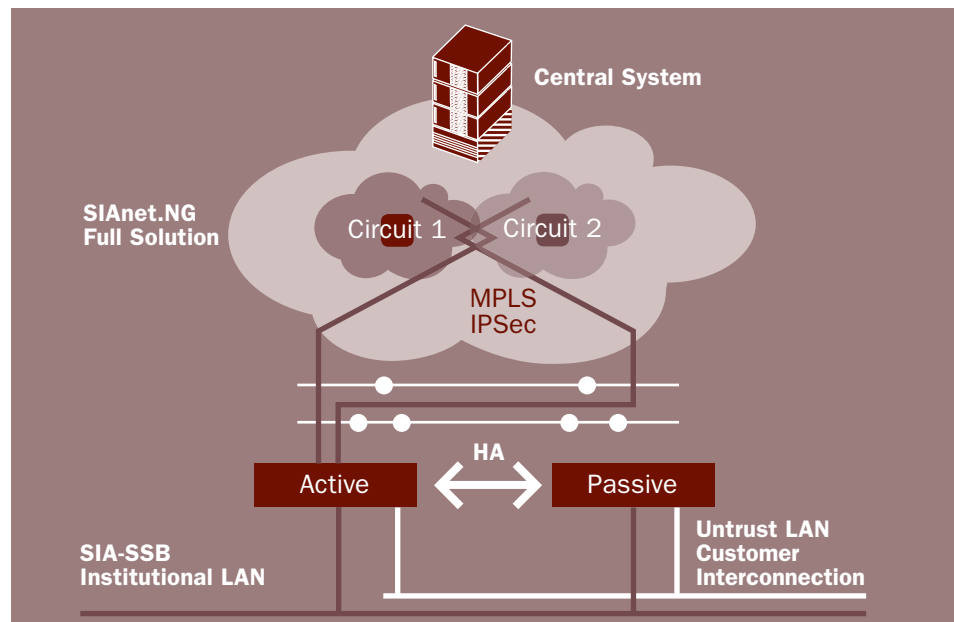
simplicity of use and **technological innovation** while **guaranteeing high Service Levels**.

Security is guaranteed by Firewalls with implemented security policies (ACLs) and is carried out via a ciphered VPN (Virtual Private Network) channel, according to the IPSEC 3DES standard, which establishes a secure end-to-end communication channel between the customer's headquarters and the applicative/central systems for the processing of credit and debit cards, payments systems and capital markets.

SIAnet.NG Standard Suite

A suite of fiber optic, broadband network configurations, capable of guaranteeing your mission-critical activities high performances, security

SIAnet.NG Connectivity



and flexibility, while minimizing risks and optimizing investments. The solutions designed with access speed and BMGs (Minimum Guaranteed Band) ranging from 2048 kbps to 10240 kbps are:

- :: **Full Solution:** solution with high reliability levels
- :: **Single Solution:** standard solution
- :: **Single Plus Solution:** standard solution with isdn backup.

SIAnet.NG Light Suite

SIAnet.NG Light is an integrated, flexible solution specifically created to support the customer's future expansions.

Thanks to the xDSL technology, SIA-SSB guarantees its customers high performance levels at low cost.

Access is achieved through xDSL lines with different BMGs.

The solutions with access speed and BMGs ranging from 128 kbps to 1024 kbps are:

- :: Full Light Solution
- :: Single Solution

Benefits

:: **Technological**

- > The solution optimizes the performances of your business or mission critical applications
- > It keeps pace with the short life cycles of the technology
- > It evolves alongside your business
- > It rationalizes and simplifies the equipment at the customer's premises

- > It guarantees specific technical competence and best-in-sector structures
- > It guarantees high performance levels of the service supplied

:: **Resources**

- > The solution rationalizes the use of internal IT resources, which can thus be utilized to manage your business applications
- > It optimizes investments in technology enabling greater economies of scale with the development of your organization
- > It permits customers to focus on their core objectives, without the need to worry about infrastructure and connectivity issues
- > It releases customers from the need to acquire new know-how and competences concerning complex WAN protocols and to bear the cost of specialized IT consultants

:: **Costs**

- > The solution reduces operating and management costs by increasing the overall connectivity at your disposal
- > It reduces global network costs (elimination of capital investments and savings on running costs)
- > It reduces network costs
- > For those customers who fully exploit system synergy, it offers ongoing economic advantages
- > It supports a wide range of speed levels to connect the customer to the various Domain Accesses in the most suitable manner and at the lowest possible cost.

Technological Approach

The main strength of SIA-SSB's technological approach is the **optimal reliability of its network**, created with the purpose of providing a multi-service, multi-domain platform to access the most important financial, banking and institutional services.

SIAnet FINANCIAL RING

The state-of-the-art network designed for all financial brokers

By its nature, the financial sector requires a complex, close-knit connectivity network that is, therefore, costly. **SIAnet Financial Ring** is the **one-stop solution** exclusively designed for the financial community that consolidates all connectivity accesses to international markets into one **reliable, secure and fast** connection, thus allowing for **reductions in the costs attributable to complexity**.

SIAnet Financial Ring is the connectivity solution enabling financial brokers to access European and international financial marketplaces and their trading partners in the **simplest, most flexible** manner and at **lowest cost**. It is a single technological network infrastructure which connects the centers in Milan and London with **high reliability** and **low network latency**, offering direct access to the Production and DR systems of the Financial Venues.

Born out of SIA-SSB's thirty years' experience and designed to respond to the needs of financial brokers, **SIAnet Financial Ring** guarantees exceptional service levels thanks to the adoption and management of market leading technology solutions:

- :: fiber-optic redundant backbones connecting the Milan offices with SIA-SSB's PoPs in London
- :: different network and carrier routes to increase the level of security and

reliability

- :: DWDM technology
- :: point-to-point SDH connections at extremely high speed (1 Gbit/s);
- :: direct fiber-optic connections to market platforms
- :: customized connections with trading partners.

The network configuration is customized according to each broker's specific needs and is scalable and modular to adapt to business evolutions. It is in fact possible to update one's configuration rapidly, and at any time, in terms of:

- :: markets and trading partners reached
- :: bandwidth
- :: access points.

The new technological Network infrastructure makes use of SIAnet.NG technology to link the operating offices of financial brokers while ensuring:

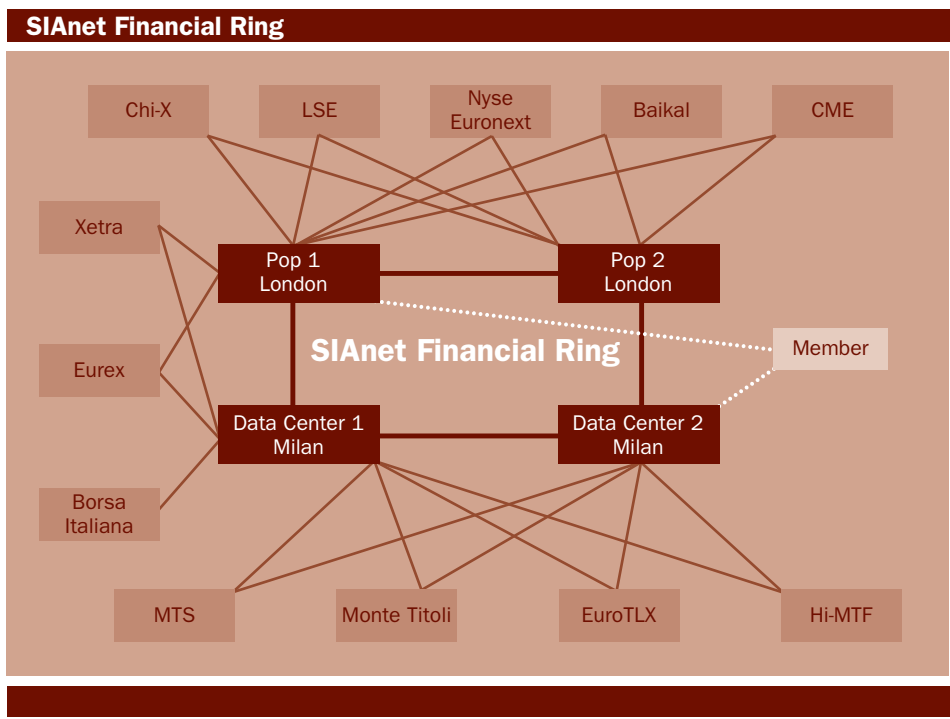
- :: **Reliability and Security:** highly reliable, protected fiber-optic connections
- :: **High level performances:** scalability and low network latency
- :: **Service Management:** operation, maintenance, monitoring and assistance 24/7.

Growth is made more simple with **SIAnet Financial Ring**. Our consolidated network infrastructure allows for a progressive reduction in

costs with the increase in the number of trading centers and trading partners reached. In this way, the addition of a new access immediately translates into a significant reduction in connectivity costs for all the accesses in the portfolio.

SIAnet Financial Ring connects the main international financial marketplaces, enabling access to trading and market reporting systems:

- :: London Stock Exchange
- :: Borsa Italiana
- :: Xetra
- :: Eurex
- :: MTS
- :: Nyse Euronext
- :: Chi-X
- :: Hi-MTF
- :: EuroTLX
- :: Baikal
- :: CME



SIAnet FINANCIAL RING The fast lane to financial markets.

London Stock Exchange & Borsa Italiana

In May 2008, **SIA-SSB** attained from LSE the status of **Network Service Provider** for its SIAnet.NG network. It is also Services Provider for Borsa Italiana markets.

LSE Domain Access is SIA-SSB's complete offering for access to the **TradElect, Infolect, IDEM** and **MFD/DDM+** systems from Milan and London, including:

- :: logical network access on SIAnet Financial Ring
- :: access to TradElect and Infolect Production and Disaster Recovery
- :: full depth of Infolect market native data
- :: full depth of MDF/DDM+ market flow
- :: access to trading functions: Blue Chips, STAR, MTA International, STANDARD 1 and 2, Expandi 1 and 2, Closed OICR, MOT/EuroMOT, SEDEX, ETF Plus, MAC, TAH, LSE, JSE and DTS
- :: access to the IDEM market through Network Gateways.

Deutsche Börse (Xetra, Eurex)

SIA-SSB, as **Multi Member System Provider**, offers access to the Xetra and Eurex markets.

Xetra/Eurex Domain Access is the complete SIA-SSB offering for access to Trading EDP systems from Milan and London, including:

- :: logical network access on the SIAnet Financial Ring
- :: logical network access on the Deutsche Börse Network
- :: complete management of MISS Multi Member servers
- :: configuration of applicative market

accesses on the centralized infrastructure (MULTI MEMBER MISS via Values API) at the SIA-SSB Data Center/s – Milan/London for connection to Xetra/Eurex Trading EDP

- :: access to trading functions and depth of data flow.

MTS

SIA-SSB is **Network Service Provider** and **System Provider** for the MTS market.

MTS Domain Access includes:

- :: logical network access on the SIAnet Financial Ring
- :: access to the system platform (TradImpact, developed and managed by SIA-SSB)
- :: access to trading functions:
 - > **The wholesale markets**
EuroMTS, EuroCredit MTS, NewEuroMTS, EuroGlobalMTS, MTS Quasi-Government Market, Eurobenchmark Treasury Bills Market, EuroMTS Linkers Market, MTS Cedulas and BondForAll;
 - > **The local markets** MTS Amsterdam, MTS Austrian Market, MTS Belgium, MTS Denmark, MTS Deutschland, MTS Finland, MTS France, MTS Greek Market, MTS Ireland, MTS Israel, MTS Italy, MTS Portugal, MTS Poland and MTS Spain
 - > **BondVision**, the market between financial brokers and institutional clients
- :: depth of data flow.

Additionally, in order to eliminate network latency, access to the **Proximity MTS** offering is available.

Nyse Euronext

SIA-SSB, as **Extranet Service Provider (ESP)**, offers access to the markets provided by Nyse Euronext on the SFTI network.

Nyse Euronext Domain Access includes:

- :: logical network access on the SIANet Financial Ring
- :: logical access to the two SFTI Access Points in London
- :: access to the Universal Trading Platform (UTP) for the NYSE Euronext Cash, Euronext Data Solutions, Index data and Arca financial services
- :: depth of data flow.

Chi-X

SIA-SSB, as **Managed Extranet** provider, offers access to the **Continuous Block Cross** trading systems of the Chi-X market.

Chi-X Domain Access includes:

- :: logical network access on the SIANet Financial Ring
- :: access to market, production and DR platforms
- :: access to trading functions and depth of data flow.

Hi-MTF

Hi-Mtf SIM S.p.A. organizes and manages Hi-Mtf Multilateral Trading Facilities and the Hi-MTF Order Driven market, on which financial instruments such as foreign treasury bonds, Italian treasury bonds, corporate bonds, large caps bank bonds and structured bonds are traded.

Hi-MTF Domain Access includes:

- :: logical network access on the SIANet Financial Ring
- :: access to production and DR systems of the Hi-Mtf Multilateral Trading Facilities and Order Driven markets
- :: access to trading functions and depth of data flow.

EuroTLX

EuroTLX SIM S.p.A. organizes and manages the Multilateral Trading Facility (MTF) system for financial instruments such as treasury bonds, corporate bonds, non-eurobond bank bonds, emerging market bonds, financial bonds, extranational/agency bonds, CERT-X, STOCKS/DR.

EuroTLX Domain Access includes:

- :: logical network access on the

SIAnet Financial Ring

- :: access to the Click XT trading, production and DR systems for the EuroTLX market
- :: access to trading functions and depth of data flow.

CME

CME Group, formed in 2007 from the merger between CBOT and the Chicago Mercantile Exchange, is the largest market in which derivate instruments are traded.

CME Domain Access includes:

- :: logical network access on the SIANet Financial Ring
- :: logical access to the two different CME Globex Hubs in London
- :: access to trading functions and depth of data flow.

SIA-SSB S.p.A.

Via T. Taramelli, 26
20124 Milan, Italy
t +39.02.6084.3655
info@siassb.eu

