

perago:rtgs

A real-time gross settlement (RTGS) system is a cornerstone of a modern economy and is the foundation upon which new electronic payment services, which are more convenient and efficient and in which risks are mitigated, can be developed.

The Perago solution

Perago offers its **state-of-the-art** RTGS system (referred to as Perago:rtgs) to central banks worldwide. The Perago:rtgs is designed to align with the Bank for International Settlements (BIS) Core Principles of Systematically Important Payment Systems. It therefore presents to the central bank not only a funds transfer system, but also business processes that are moulded according to international best practice.

The Perago:rtgs system is **scalable**, not only in terms of processing capacity, but also in functionality and the sophistication thereof. The system is **language independent** and requirements for non-English interfaces can be accommodated.

RTGS systems have traditionally focused on the settlement of domestic currencies in a country. There are, however, certain currencies, e.g. the EURO and US Dollar that are used as

legal tender outside the borders of the country of issue. This suggests that there is a business case for improving the mechanisms for settling payments in these currencies in a local market. In order to meet this requirement, the Perago:rtgs provides for two broad currency settlement configurations, namely a domestic currency configuration (Perago:rtgs/domestic) and a foreign currency configuration (Perago:rtgs/foreign).

The Perago:rtgs system can also be configured to include a clearing component (Perago:clear), which facilitates the settlement of lower value retail payments on a pre-funded, credit-push basis (i.e. credit transfers) with finality and irrevocability before a pre-determined cut-off time. This configuration is in line with the World Bank concept of an Automated Transfer System (ATS), which processes retail and wholesale payments through the same system.

The Perago:rtgs solution is fully **SWIFT compliant**. The system is designed to integrate with the SWIFT network or any private network that supports the multi-protocol, multi-platform IBM WebSphere® MQ messaging middleware and is web-enabled to capitalise on the SWIFTNet offering. The system incorporates

the highest level of **technological independence** possible and utilises only de facto industry standard technologies. Data integrity, security and confidentiality are fundamental to the design.

With the Perago:rtgs system, Perago has moved beyond standard RTGS functionality. Perago:rtgs is a new generation, comprehensive settlement system with the power and flexibility to grow and evolve as the needs of countries and their financial markets change.

Key components

The Perago:rtgs system comprises a central RTGS application, an access and authorisation control module, a central bank system administration module, a network interface and front-end applications for banks and settlement agents.

The **central application** is modular, comprising the core settlement engine which provides the essential settlement functionality and various optional modules, which may be added to the settlement engine resulting in a more comprehensive RTGS system. The central bank is provided with an administration component which includes all facilities

required to configure and manage the system, including masterfile changes, monitoring of the positions of individual banks, total industry positions, enquiries and statistics.

The browser-based front-end system for participant banks and settlement agents provides all facilities required to interact with the settlement engine, including facilities to capture funds settlement transactions, to request reports and to monitor positions in real-time.

Messages interface specifications facilitate integration of the system with back office systems for straight-through processing (STP) purposes.

Currency configurations

The Perago:rtgs system can be configured for a domestic currency and / or one or more foreign currencies.

Key features – domestic currency configuration (Perago:rtgs/domestic)

The Perago:rtgs (domestic) system can be viewed as a **hybrid** system that has entrenched RTGS principles, but also incorporates the advantages of netting for liquidity purposes. The key features of the system include:

- :: **Real-time, immediate, final and irrevocable settlement** of both single instructions and batches of settlement instructions
- :: **Diarising** facilities for future-dated settlement instructions
- :: Various **credit facility** options for both intraday and overnight credit facilities namely, credit limits, loans secured by pledged collateral and intraday repurchase agreements. These modules include sophisticated facilities for managing the credit facilities and underlying instruments. Intraday liquidity can be further supplemented by making statutory **reserves** available on an intraday basis, managed within the system in line with statutory requirements
- :: Users can manage **queue priorities** and/or allow the system to utilise sophisticated liquidity **optimisation and gridlock resolution mechanisms** to achieve settlement with minimum liquidity
- :: Participants have real-time access to **monitor their positions**
- :: The **settlement schedule** can be managed by the central bank and can be fully automated to run on a 24x7 programme;
- :: The calculation and recovery of settlement related **charges** and **interest** can be included
- :: The **accounting** component includes full adherence to generally accepted

accounting principles (GAAP), as well as the ability to interface to the central bank's general ledger and facilities to enable participating banks to automatically update their accounting systems

- :: The system permits **authorised agents** (such as clearing houses) to provide business services and/or technical infrastructure services to participating banks
- :: Numerous **enquiries and reports**, which may be customised via parameters, are available to both the central bank and settlement banks
- :: **Statistics** on daily utilisation is available and can be extended to include a tailor-made data warehouse which allows analysis with sophisticated tools
- :: A high premium is placed on **security**, therefore Perago:rtgs contains comprehensive functionality to prevent unauthorised access and to ensure system integrity
- :: Messages comply with **SWIFT standards** and are designed to facilitate Straight-Through-Processing (STP) and reconciliation with participants' internal systems
- :: The system is fully swift enabled and utilises Interact, FileAct and Browse functionality to provide SWIFTNet Browse front-end as well as cash reporting functionality.

Key features – foreign currency configuration (Perago:rtgs/foreign)

The Perago:rtgs/foreign system offers a number of features that support the local settlement of foreign currencies (i.e. currencies issued outside of the borders of a country). Perago:rtgs/foreign consists of a number of modules, which can be configured to provide various solutions. Functionality includes, for example enabling:

- :: The local settlement in other (one or more) authorised foreign currencies.
- :: Participating settlement banks to inject liquidity into their foreign currency account(s), either from their correspondent bank account in the same foreign currency or based a foreign currency account held for this purpose in the general ledger of the central bank. Conversely funds can also be extracted.
- :: A regional arrangement where local settlement banks in one country can make payments to, or receive payments from, foreign banks in another country within the region. The authorised currencies that can be settled cross-border are registered in the local RTGS system. The regional central banks act as cross-border service providers and are registered in each other's RTGS systems in order to facilitate the cross-border payments.

Benefits

The Perago:rtgs provides central banks with the tools to manage and reduce risk in their financial industry and provides the platform for real-time, secure e-commerce, thus benefiting the entire economy.

The Perago:rtgs enables national financial systems to leapfrog into the electronic era, bypassing outdated payment technologies to participate in the global electronic marketplace.

Tangible benefits accrue in the entire financial sector all the way from efficient high value payment and clearing between banks, through government payments, securities trading and business-to-business payments, to low value consumer-to-business and consumer-to-consumer payments.

The Perago:rtgs system provides the backbone for funds transfers between banks and also mitigates the risks inherent in these transfers in that:

- :: settlement instructions are credit push and therefore have to be prefunded
- :: settlement takes place on a gross basis and is final and irrevocable
- :: exposures are visible

Integrated retail payments clearing configuration

The Perago:rtgs can be bundled with Perago:clear, an application that has been developed in response to the requirements of and developments in the retail payment sector worldwide, to address retail payments in bulk within the same system (ATS concept of the World Bank).

Complementary products

Perago:rtgs can be tightly integrated with Perago:csd and Perago:clear. Perago:stp is available for integration of RTGS payments to back-office systems such as the general ledger. Perago:pay provides a payments engine for government payments and receipts.

The Perago:rtgs can be implemented to operate through Perago's Trustlink SWIFT service bureau.