INTERCOPE

BOX for SWIFTNet - MERVA Migration
With IBM and INTERCOPE Components

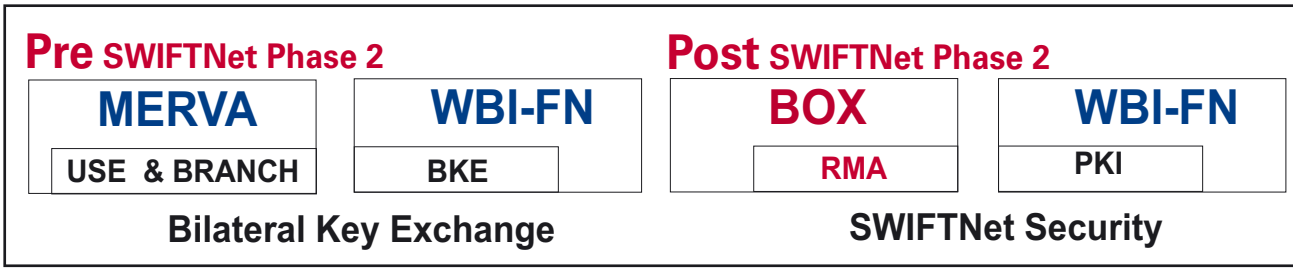
History
Many years ago, IBM created a de-facto standard for FIN transaction handling with MERVA (Message Entry and Routing with Interfaces to Various Applications), which has been used for decades by more than 300 of the largest banks and service providers worldwide, and will probably continue to be used for quite some time.

Challenge
As MERVA will no longer be developed (apart from the annual FIN changes) and will not support new SWIFT services, such as ISO 20022 messages, all these customers will need to come up with a migration strategy in the coming years. Functions being implemented with MERVA today will have to be reproduced using new technologies while ensuring new SWIFT services are efficiently supported.

Solution - integrating WBI-FN with BOX for SWIFTNet
Essential functionality:

- ✓ FIN, InterAct, FileAct, ISO 20022, PKI, RMA
- ✓ Routing, Printing, Journal, Message Warehouse
- ✓ Message Entry, Authorization, Repair, Retrieval
- ✓ Archiving, End-of-day processing, Fax, Telex, Testkey
- ✓ Support of MERVA queues, Emulation of MERVA API and Batch

Migration - mandatory to start now
As a first step mandated by SWIFT, a new Relationship Management Application (RMA) must be implemented and operational by third quarter 2008 at the latest.



Components

With WBI-FN ("WebSphere Business Integration for Financial Networks"), IBM has created a platform which supports the SWIFT Secure IP Network (SIPN) and SWIFT services like FIN, Interact and FileAct. Today nearly all WBI-FN installation are used in combination with one or several MERVA systems to exchange FIN messages and to facilitate the usage of new SWIFT services for external applications. Although WBI-FN provides the technical platform to connect financial institutions with SWIFTNet, it does not provide the application functionality which MERVA users need and expect to retain with a new SWIFT system.

Hence INTERCOPE's BOX for SWIFTNet (BOX) was developed with the goal of providing a complete and modern solution together with WBI-FN. This includes all relevant functions of MERVA as well as full support of the new SWIFTNet services.

When designing BOX the challenge of MERVA migration was incorporated from the outset, whereby INTERCOPE could exploit more than 100 aggregate years of MERVA experience. As a result of this effort, BOX is today a solution which includes many MERVA specific functions and makes them available on modern architecture. Additionally, several tools provided as part of the overall BOX solution facilitate the use of external applications without added changes required. This greatly simplifies the migration process and minimises risk. In detail this is achieved by the following features of BOX:

BOX implements the standards of a Relationship Management Application (RMA) which, together with the new PKI infrastructure, replaces the bilateral keys (BKE). INTERCOPE's RMA was specifically designed for large institutions and service providers and offers numerous functions beyond the SWIFT specifications; in particular a real time update of the WBI-FN RMA runtime DB, a function which many institutions consider indispensable.

BOX embeds a SOA service which allows external applications to verify, at the time the message is generated, whether or not an authorization exists for a specific correspondent or message type.

With the RMA component of BOX, an extension to MERVA is supplied which allows verification as to whether or not an RMA relationship exists.

BOX fully supports multi institution setups and is therefore ideally suited for MERVA migration for service providers with multiple MERVA systems.

BOX offers a comprehensive hierarchical User Profile Management (UPM) with up to eight levels which allows the mapping of even the most complex organizational structures.

BOX has a queue concept which includes attributes of MERVA queues such as "start of external transaction" or "start/stop of queue" etc.

BOX offers comprehensive routing options which mirror all routing capabilities of MERVA. All fields of a message in BOX can be checked, i.e. besides the payload also header information, user defined fields and information generated in BOX.

Components

BOX offers automatic printing functions accessible via routing, as well as usage of manual printing functions in all journals and queues.

BOX offers comprehensive query options with numerous filters in different configurable journals. Message access is controlled via UPM which offers an elegant way to save a lot of MERVA queues and greatly simplifies routing.

BOX offers online access to separate database tables which store all SWIFT messages (incl. acknowledgements, data history etc.). The time span of this feature is configurable.

BOX offers comfortable message entry and authorization for FIN and ISO 20022 messages with graphical browser based user interface.

BOX offers comprehensive syntactical and semantic message validation including cross-field checking as per SWIFT specification. This is always performed for messages created manually in BOX, but also optionally for messages received from external applications. Moreover, external applications can use a message validation SOA service which allows message integrity to be verified at message generation time.

BOX offers graphical browser based user interface for message repair to be used for messages created in BOX or received from WBI-FN or external applications.

BOX offers graphical browser based user interface and journal functions for the WBI-FN Message Warehouse.

BOX incorporates end-of-day processing via the WBI-FN Message Warehouse including gap control (ISN and OSN).

BOX offers generic interfaces to archiving systems and a specific integration with IBM DB2 Content Manager.

BOX enables the continued use of MERVA specific batch functions. This feature eases the migration from MERVA to BOX and incorporates an emulation of the MERVA programs DSLSDI and DSLSDO.

BOX incorporates an emulation of the most important services which are provided by the MERVA program DSLAPI, in particular for queue management services, Tokenized Form (TOF) services and Message Format Services (MFS). This allows external applications to be continued to be used without changes, even if MERVA is no longer used.

BOX incorporates the full MERVA telex function including testkey. Additionally, BOX offers the exchange of messages via fax, email and SMS.

MERVA Legacy

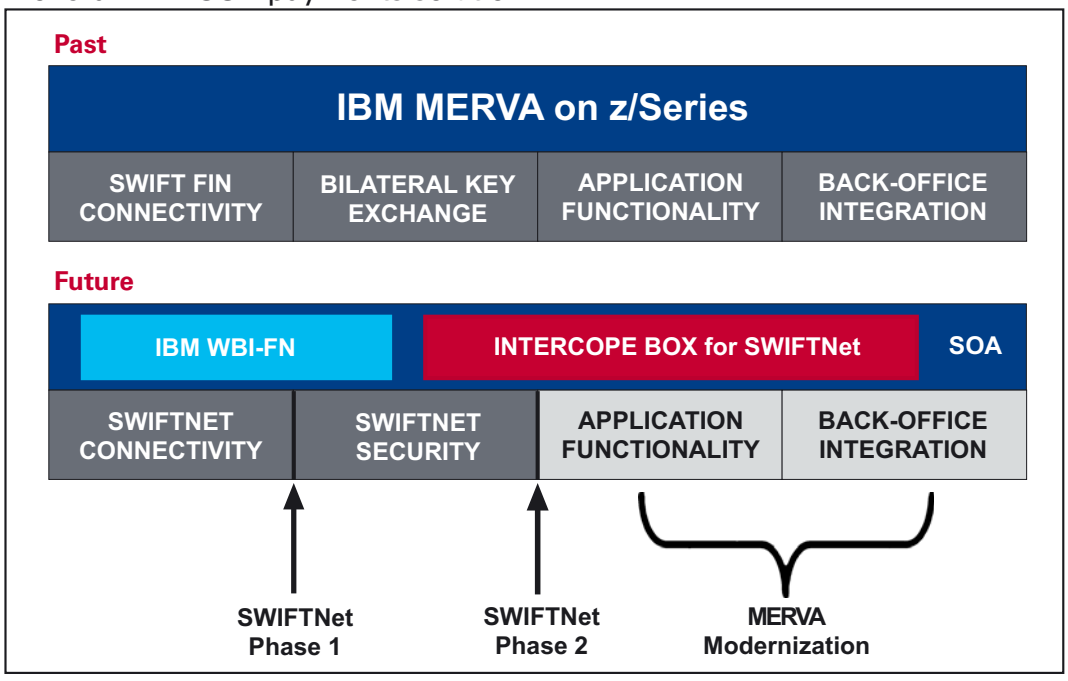
MERVA has evolved over the last decades and offers a wealth of functions and configuration options, which are often implemented according to customer specifications. Hence, MERVA migration projects are usually highly complex and multi-faceted. A MERVA migration project faces the difficult challenge of modelling a system and reconstructing it based on new technology addressing one or several of the following subjects:

- hundreds of MERVA queues are considered standard, even thousands are not uncommon
- complex organizational structures are modelled in MERVA and elaborate mechanisms for analysis and routing are applied to determine message destination
- use of specific characteristics of MERVA queues ie.manual start/stop, loading of external applications upon receipt of messages or sequential and indexed access
- batch functions allow loading of messages from sequential files and unloading of messages from MERVA queues in sequential files
- customer applications interact in various ways by utilizing the MERVA API
- reports and end-of-day processing are implemented with help of MERVA reconciliation statistics

Future

To recap, the synergy of WBI-FN and BOX forms a complete, future oriented SWIFT solution which spans all technical and application oriented aspects of SWIFT message handling and enables a step-by-step migration off MERVA.

Thanks to its usage of IBM SOA foundation products this "New MERVA" can form an integral part of an overall IBM SOA payments solution.



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