

This Technical Project Appendix provides supporting evidence of my specialist experience in enterprise payment systems, electronic transaction processing, banking technology transformation and mission-critical systems delivery. It summarises selected technical skills, project contributions, platform expertise, implementation experience and training relevant to senior payments technology, banking transformation, consulting and executive IT leadership roles.

Technical Skills Summary

Payment Applications and Systems

- HP NonStop / Tandem CLX, K-Series, S-Series and N-Series Itanium
 - *Operating System:* Guardian 90
 - *Modules:* TMDS, DSAP, VIEWPT, VIEWSYS, SYSGEN, FUP, PUP, BIND, DEBUG, COUP, SAFEGUARD, BACKUP, RESTORE, NETBATCH, SPOOLCOM, TAPECOM, MEASURE.
 - *Protocols:* X25AM, TCP/IP, SNAX, SNAX/XF, CMI, SCF, TCP-IP, SNA, X.25, TTY, Visa, Visa1, Visa2, ASYNC & BISYNC.
 - *Replication:* DRNet, HP Nonstop TMF/RDF
 - *Database Management:* SQL, ENSCRIBE
- BASE24 POS, ATM, TELLER (5.x, 6.x)
 - NCR N50, DIEBOLD, SPDH, VisaNet, BANKNET, MDS, HISO, BIC ISO, Extract, Refresh, Settlement, Reporting, POS RTAU, ATM & TELLER Auth, APACS 30/40/50, SPAN2, FHM, EMS, XPNET 2.1, TMF,
 - EMSPERUS, XPNET 2.1 to 4.0, BIND, MAKE, PATHWAY, TSS/AKDS, EPS (5.4, 6.8, 7.4)
- BASE24-TSS: TSS/AKDS
- BASE24-eps (5.4, 6.8, 7.4,11): NCR N50, DIEBOLD, SPAN2 (up to version 6.0.15), HISO, Extract, Refresh, Settlement, Reporting, POS RTAU, ATM Auth, Scripting
- Microsoft Windows
- ICL Series 38
- DIGICARD Card Printing Systems (DIGICARD - Vienna, Austria).

Database Management

- Other: INGRESS 4GL

ATM, POS and Channel Technologies

- NCR: Bunch Note Acceptor (BNA) NDC / NDC+, APTRA, NDC Enterprise, Multivendor ATM Solutions
- Diebold: Agilis 91x / TCS, Diebold Opteva and IX ATMs
- VERIFONE POS Terminals: T420, 340, T1200C, Printer 250, PIN-PAD 101, TCLOAD, VLOAD, ZONTALK 2000, MIMIC and MKIXOR

Programming Languages

- HP NonStop: TACL, COBOL II, COBOL 85, TAL, SCOBOL, SCOBOLX, C
- VERIFONE: TCL
- Other: PASCAL, C, C++, Assembly Language, HTML

Interfaces, Networks and Protocols

- Interfaces: ISO 8583, Visa / VisaNet, Banknet, SPAN2, BIC ISO, APACS 30/4-/50
- Protocols: X25, TCP/IP.

Testing, Simulation and Certification Tools

- Visa VTS, Mastercard MIT, Level Four ATM Channel Development Suite
- VERSATEST, GENSIM, ABBREVIEW Astrex Simulator
- Europay EPS-Net Self-Test Facility
- ECCSS Simulator, Host Simulators and Scheme Certification Tools

Projects Register

Arab National Bank - Strategic Payment Platform Transformation

BASE24 Classic Replacement with FIS IST, APEX and CORTEX

Scope/contribution: Supported the bank's strategic initiative to replace BASE24 Classic with FIS IST, APEX and CORTEX platforms. Contributed to the migration approach by helping ensure the new platforms could process transactions in a way that aligned with existing BASE24 behaviour, thereby reducing the impact on surrounding systems and business operations.

Technologies/domains: BASE24 Classic, IST, APEX, CORTEX, transaction behaviour alignment, migration support, stakeholder and vendor coordination.

BASE24-eps Migration

Scope/contribution: Supported the migration from BASE24 Classic to BASE24-eps version 11.1 SP3, including installation, configuration and interface readiness. Contributed to the Network First implementation option, SPAN2 and HISO migration activities, and the creation of new reconciliation scripting reports to replace BASE24 Classic reporting.

Technologies/domains: BASE24 Classic, BASE24-eps 11.1 SP3, Network First, SPAN2, HISO, reconciliation scripting.

BASE24-TSS and Automated Key Distribution System (AKDS)

Scope/contribution: Implemented and supported BASE24 TSS and AKDS functionality on HP NonStop S-Series and Itanium.

Technologies/domains: BASE24-TSS, AKDS, HP NonStop S-Series, Itanium, transaction security.

Arab National Bank - Tokenised & Contactless Payments

Tokenised Payments - mada Pay and Apple Pay

Scope/contribution: Delivered customisation for all Base24 modules and interfaces, including Authorisation, SPAN2, Visa, HISO, Refresh, Extract, and Business and Reconciliation processes, to support tokenised payments through mada and Visa. Supported scheme certification and production implementation.

Technologies/domains: mada Pay, Apple Pay, Visa, tokenisation, POS Authorisation, SPAN2, HISO, Refresh, Extract, reconciliation, certification.

Contactless cards on POS and ATM

Scope/contribution: Implemented contactless card functionality across POS terminals, NCR ATMs and Visa international transaction interfaces. Modified Device Handlers, ATM Authorisation, SPAN2, POS Router/Authorisation, HISO and reconciliation components. Supported mada and Visa certification.

Technologies/domains: Contactless, POS, ATM, NCR, Visa, mada, Device Handlers, ATM Authorisation, SPAN2, HISO.

Arab National Bank - ATM System Modernisation:

ATM GRAPHIC SCREENS Project

Scope/contribution: Supported the replacement of legacy text-based ATM screens with modern graphic screens across NCR and Diebold ATMs. Customised NCR and Diebold Device Handlers, configured screen and state files, and supported testing with ATM business teams before production deployment.

Technologies/domains: NCR, Diebold, ATM screens, state files, device handlers, customer experience modernisation.

NCR NDC Enterprise

Scope/contribution: "NDC Enterprise is an ATM application that replaces the states and screens downloaded from the Host (Switch) and allows the flow and interactions to be controlled by the enterprise server instead. This application allows the usage of modern, agile technology and practices (HTML5, CSS3, AngularJS, JavaScript) to introduce innovative new business services for use with existing Switch-based transactions."

Enabled host interaction for financial transactions processed through NCR NDC Enterprise, supporting modern ATM interaction flows while preserving switch-based transaction processing.

Technologies/domains: NCR NDC Enterprise, HTML5/CSS3/AngularJS/JavaScript-enabled flows, BASE24 switch interaction.

NCR Multivendor ATM

Scope/contribution: The NCR Multivendor application enables the NDC application to run on non-NDC ATMs. Customised BASE24 to enable NCR Multivendor applications to operate on Diebold ATMs while interacting with BASE24 for financial transaction processing.

Technologies/domains: NCR Multivendor, Diebold ATMs, BASE24, device handler customisation.

Diebold EMV

Scope/contribution: Introduced EMV functionality on Diebold ATMs by modifying Device Handlers, configuration files, and ATM Authorisation modules. Supported acquirer certifications with SAMA, Visa, and Mastercard.

Technologies/domains: Diebold, EMV, Device Handlers, ATM Authorisation, SAMA, Visa, Mastercard.

DIEBOLD Bulk Note Acceptor (BNA) for Agilis 91x

Scope/contribution: The Bunch Note Acceptor functionality in Diebold's Agilis software allows depositing a bunch of notes, counting and verifying them, and returning them if any are rejected or the transaction is cancelled.

Introduced EMV functionality on Diebold ATMs by modifying Device Handlers, configuration files, and ATM Authorisation modules. Supported acquirer certifications with SAMA, Visa, and Mastercard.

Technologies/domains: Diebold Agilis 91x, BNA, deposits, ATM device handling, transaction flow support.

Arab National Bank - Host System Integration

Finacle upgrade (Finacle 10x to 11x ISO migration)

Scope/contribution: Designed, developed, tested and implemented a new BASE24 ISO 8583 interface to connect BASE24 to the Finacle 11x host system, replacing the earlier HISO interface to Finacle 10x. Ensured correct POS and ATM transaction processing across BASE24 and Finacle.

Technologies/domains: BASE24, Finacle 10x/11x, ISO 8583, HISO replacement, POS/ATM processing.

Hala Merchant Integration

Scope/contribution: Configured, customised, and implemented a BIC ISO interface that allows BASE24 to route Hala merchant-acquired transactions to the Hala system for online processing.

Technologies/domains: BASE24, BIC ISO, Hala, merchant acquiring, online authorisation.

SAMA Transaction History Project

Scope/contribution: Designed and implemented a BIC ISO interface to route issuer and acquirer ATM/POS advice transactions to an IST host for onward online delivery to SAMA.

Technologies/domains: BIC ISO, IST, SAMA, issuer/acquirer advice transactions, ATM/POS.

EJADA reconciliation system

Scope/contribution: EJADA reconciles online transactions received by Base24 with those from Finacle, mada, and Visa.

Designed, developed and implemented BASE24 extract solutions to provide EJADA with local and international POS and ATM transaction data for reconciliation against Finacle, mada and Visa.

Technologies/domains: BASE24 Extract, EJADA, reconciliation, Finacle, mada, Visa, and local and international transaction data.

SADAD – Saudi Arabia Ministry of Interior Payment System

Scope/contribution: As a SADAD member bank, Arab National Bank is mandated to provide payment services to the Saudi Arabian Ministry of Interior (MOI).

Implemented MOI bill payment and refund functionality on NCR and Diebold ATMs through BASE24 modifications to Device Handlers, ATM Authorisation and HISO.

Technologies/domains: SADAD, MOI payments, NCR, Diebold, BASE24, Device Handlers, ATM Authorisation, HISO.

Phone Banking Transaction Processing

Scope/contribution: Customised the Visa interface to support the FDR-Net ISO 8583 message format used by First Data Incorporated. Customised, tested and installed the POS module of the HISO interface for Phone Banking transaction processing, including end-to-end testing with FDI using VERSATEST.

Technologies/domains: Visa interface, FDR-Net, ISO 8583, FDI, HISO POS module, VERSATEST.

PRDF From Host Maintenance (FHM)

Scope/contribution: The POS Retailer Definition File (PRDF) file contains information for all ANB merchants.

Developed and customised a From Host Maintenance interface for online updating of POS Retailer Definition File records.

Technologies/domains: PRDF, FHM, POS retailer records, merchant maintenance, BASE24.

Instant Payment Transactions (IPS)

Scope/contribution: Developed and implemented ATM-related business and technical components for Instant Payment Transactions supported by SARIE, in accordance with SARIE-mandated IPS transaction and transfer standards.

Technologies/domains: IPS, SARIE, ATM, instant payments, transfer standards.

Arab National Bank - Card Management Systems

Debit Card Management System (DCMS) Integration

Scope/contribution: Integrated BASE24 with Postilion DCMS to replace the bank's in-house debit card management and Smart Chip Manager environment. Modified Refresh, Authorisation, HISO and FHM modules to support:

- ☐ PIN Change notification to Postilion.
- ☐ New card activation on Base24 with ISO notifications routed to Postilion online.
- ☐ Re-issuing duplicate cards with the member number as a differentiator.
- ☐ EMV scripting to manage Offline PIN unblocking and update EMV velocity limits.

Technologies/domains: Postilion DCMS, BASE24, Refresh, Authorisation, HISO, FHM, PIN Change, card activation, EMV scripting.

CORTEX Integration

Scope/contribution: Enabled multi-currency Credit Card, ATM, and POS transactions on the new IST CORTEX system, which superseded the FDI system.

Configured, customised, and implemented BIC ISO interfaces to route multi-currency credit card, ATM, and POS transactions from BASE24 to the IST CORTEX host for online authorisation.

Technologies/domains: IST CORTEX, BASE24, BIC ISO, multi-currency, credit card, ATM, POS, online authorisation.

APEX Card Management System Integration

Scope/contribution: Supported implementation of APEX as the successor to the Debit Card Management System. Modified the BASE24 Refresh, Authorisation, HISO, and FHM components to support card lifecycle and EMV scripting requirements, similar to the DCMS system.

Technologies/domains: APEX, BASE24, Refresh, Authorisation, HISO, FHM, card lifecycle, EMV scripting.

Arab National Bank – Card Scheme Compliance

Direct Visa Interface Implementation

Scope/contribution: ANB Business decided to implement a direct Visa Interface to process international issuer POS and ATM transactions, instead of using the SAMA (mada) Interface.

Customised, implemented and certified a direct BASE24 Visa ISO interface for international issuer POS and ATM transaction processing, replacing routing through the SAMA interface.

Technologies/domains: BASE24 Visa ISO, direct Visa, issuer POS/ATM transactions, certification, SAMA routing replacement.

Europay, Mastercard, Visa (EMV) Implementation

Scope/contribution: Enabled the Base24 system to process EMV transactions.

- ☐ Configured NCR ATMs to accept chip cards and process transactions initiated with chip cards.
- ☐ Modified the NCR N5XXX device handler to successfully accept smart card data from the ATM in BER_TLV format.
- ☐ Configured the NCR States and Screens to support the EMV PIN Change transaction.

- ❑ Created an EMV scripting engine addendum allowing the Card Management System to add multiple PUT data scripts to each CAF record for Base24 ATM Authorisation and POS Router/Authorisation (RTAU) processing.
- ❑ Customised the VisaNet Interface to support the FDR-Net ISO-8583 EMV message format, used by First Data Incorporated (FDI) to switch Arab National Bank Credit Card transactions.
- ❑ Customised the VisaNet Interface to validate the EMV BER-TLV format tags.

Technologies/domains: EMV, NCR N5XXX, BER-TLV, EMV PIN Change, Smart Chip Manager, VisaNet, FDR-Net, ISO 8583.

SPAN2 Interface

Scope/contribution: Introduced the SPAN Switch, used in Saudi Arabia to facilitate inter-bank transaction processing. The Member Bank Interface specification, which covers the transaction flows and message content for messages passing between member banks and the mada switch, served as the development guideline. Messages originated from ATM and POS systems, other participating banks, and the card schemes.

- ❑ Implemented the EMV standards of the international card schemes (i.e., Visa-VSDC (VIS), MasterCard-M/CHIP and AMEX-AEIPS).
- ❑ Customised the Base24 SPAN2 Interface to accept magstripe, EMV POS and ATM transactions from local and international locations.
- ❑ Updated the message content to conform to the Member Bank Interface specification.
- ❑ Automated Chargeback and Representation transaction processing by creating a Switch Chargeback File requester/requester for Chargeback transaction processing, which ACI eventually adopted.
- ❑ Developed an Interchange Log File requester/server to view SAMA (mada) transactions.
- ❑ Implemented the SPAN2 NG07 settlement system through Base24 Extract.

Technologies/domains: SPAN2, mada MBI, BASE24, EMV, magstripe, chargeback, representation, interchange logs, settlement, and Extract.

Visa and SAMA Mandates

Scope/contribution: Delivered recurring Visa April and October mandate changes and multiple SAMA Member Bank Interface mandates, including versions 6.11, 6.12, 6.13, 6.14 and 6.15.

Technologies/domains: Visa mandates, SAMA MBI, scheme compliance, certification, and production rollout.

eCommerce Transactions - mada and Visa

Scope/contribution: Implemented eCommerce transaction support through mada and Visa. Updated POS Authorisation, SPAN2, Visa, HISO, Refresh, Extract, Business and Reconciliation reporting components and supported scheme certification.

Technologies/domains: eCommerce, mada, Visa, POS Authorisation, SPAN2, HISO, Refresh, Extract, reconciliation.

Arab National Bank - Fraud Management

ACI Proactive Risk Manager (PRM) Integration

Scope/contribution: Configured, customised, and implemented BIC ISO routing from BASE24 to ACI Proactive Risk Manager to verify transactions before host authorisation.

Technologies/domains: ACI PRM, BASE24, BIC ISO, fraud verification, and host authorisation.

IBM Safer Payment Integration

Scope/contribution: Configured, customised and implemented BIC ISO routing from BASE24 to IBM Safer Payments, replacing ACI Proactive Risk Manager as the fraud management system.

Technologies/domains: IBM Safer Payments, BASE24, BIC ISO, fraud management replacement.

Arab National Bank – ATM Product Enhancement

Initial Public Offering (IPO) Functionality

Scope/contribution: When a company lists on the Saudi Arabian stock exchange, it makes a portion of its shares available to the public at a fixed price. A few banks are nominated to purchase the shares. The IPO effort entailed offering these shares to the public through ANB's NCR and Diebold ATMs.

Implemented IPO Application and IPO Inquiry transactions on NCR and Diebold ATMs. Modified Device Handlers, HISO and ATM Authorisation to support new transaction tokens and two-legged IPO processing. Conducted full-cycle testing using VERSATEST and Level Four ATM simulators.

Technologies/domains: IPO, NCR, Diebold, Device Handlers, HISO, ATM Authorisation, VERSATEST, Level Four.

ATM Cross-Selling

Scope/contribution: Introduced cross-selling of bank products to customers at ATMs.

Implemented ATM-based cross-selling functionality by customising NCR and Diebold Device Handlers, ATM Authorisation and HISO interfaces.

Technologies/domains: Cross-selling, ATM, NCR, Diebold, Device Handlers, ATM Authorisation, HISO.

Founders Building Society & Commercial Bank of Zimbabwe - BASE24 Consultation

BASE24 ATM and HP NonStop Consulting

Scope/contribution: Installed, configured, customised and supported BASE24 ATM software. Developed CSMs and RPQs for Authorisation, Refresh, Extract and related modules; debugged BASE24 code; applied ACI fixes; evaluated PROGNOSIS; developed TACL monitoring macros; upgraded and configured HP NonStop K-Series systems and communications.

Technologies/domains: BASE24 ATM, HP NonStop K-Series, Authorisation, Refresh, Extract, TACL, PROGNOSIS, X.25, ASYNC, SNA.

Nedcor Bank - Card Association Compliance

Card Scheme Compliance Programme

Scope/contribution: Served as primary consultant for Visa, Mastercard, Europay and American Express compliance strategy. Reviewed mandates, directed development/testing/implementation activities, created tracking processes and improved compliance to 100%.

Technologies/domains: Visa, Mastercard, Europay, AMEX, scheme mandates, compliance governance, certification.

Mastercard MDS/BANKNET and GCMS

Scope/contribution: Configured and tested Mastercard simulators for certification, reviewed global bulletins, managed BANKNET, MDS and INET/MHPF releases and supported GCMS implementation management.

Technologies/domains: Mastercard, MDS, BANKNET, INET/MHPF, GCMS, MIT simulator.

Europay EPS-Net

Scope/contribution: Configured ECCSS and EPS Network simulators, conducted EPS-Net Self-Test Facility testing and training, reviewed Europay mandates and championed required institutional changes.

Technologies/domains: Europay, EPS-Net, ECCSS, EPS Network Simulator, self-test facility.

Visa VisaNet

Scope/contribution: Configured and used the VTS 2000 simulator, reviewed Visa mandates and managed Visa EDIT Package 3 clearing system implementation activities.

Technologies/domains: Visa, VisaNet, VTS 2000, Visa EDIT Package 3, clearing.

FirstRand Bank - Strategic Business Cases

Affordable Money Transmission

Scope/contribution: Analysed and proposed a solution to provide the unbanked/emerging market with affordable money transmission services.

Technologies/domains: Business case, emerging-market banking, money transmission.

EMV Acquiring in Retail Merchant Environment

Scope/contribution: Established a cost-effective, efficient EMV migration strategy for the retail merchant environment within scheme-prescribed timescales.

Technologies/domains: EMV acquiring, retail merchants, Visa, Mastercard, migration strategy.

Prepaid Functionality through FNB Corporate Acquiring POS Devices

Scope/contribution: Evaluated provision of cash and card-based prepaid functionality on FNB acquiring POS infrastructure, including links to external product houses operated by independent mobile service providers.

Technologies/domains: Prepaid, POS acquiring, FNB, external product houses, mobile service providers.

FirstRand Bank - Integrated Payments Architecture

STRATUS to HP NonStop/BASE24 Migration

Scope/contribution: Provided primary technical support for conversion from STRATUS Systems 88 to BASE24 on HP NonStop within the Integrated Payments Architecture platform.

Technologies/domains: STRATUS Systems 88, HP NonStop K2004, BASE24 5.1/5.1.2/6.0, Guardian 90.

HOGAN Terminal Data Capture

Scope/contribution: Designed and implemented systems to refresh the Integrated Payments Architecture platform with TDC terminal information for online transaction processing.

Technologies/domains: HOGAN TDC, BASE24, terminal refresh, online processing.

HOGAN Cardholder Account Management System

Scope/contribution: Designed, developed and implemented settlement procedures for transactions acquired through the IPA system. The CAMS system received IPA settlement files from TDC, which were used to settle cardholder and merchant accounts. Designed, developed, and implemented processes to refresh and synchronise the IPA system daily, using cardholder, retailer, and account information obtained from the CAMS database and then used by the IPA system for stand-in processing.

Technologies/domains: HOGAN CAMS, settlement, refresh, stand-in processing, IPA.

HOGAN Online Delivery System

Scope/contribution: Designed and implemented an online interface for BIC ISO-based debit cards between BASE24 and HOGAN ODS.

Technologies/domains: HOGAN ODS, BIC ISO, BASE24, debit card online interface.

Visa Electron Debit Card

Scope/contribution: Prepared specifications and installation documentation for the IPA system and reviewed specifications for the South African National Debit Card Switch.

Technologies/domains: Visa Electron, debit card switch, IPA, specifications, and installation documentation.

External Host-to-Host eCommerce Clients

Scope/contribution: Investigated, designed, and implemented solutions for external e-commerce clients, including MWEB, Pick n Pay, and Makro.

Technologies/domains: Host-to-host eCommerce, BASE24, HISO/BIC ISO, MWEB, Pick n Pay, Makro.

Transaction Processing Systems - Founders Building Society & Commercial Bank of Zimbabwe – Harare, Zimbabwe

ZIMSWITCH ISO 8583 Inter-bank Switch Interface

Scope/contribution: The ZIMSWITCH Interface is a technical interface between the Zimbabwe National Switch (ZIMSWITCH) and participating financial institutions, enabling online connectivity to process ATM and POS transactions. Developed the ISO 8583 switch interface using TAL and conducted certification and installation for Zimbabwean financial institutions connecting to ZIMSWITCH for ATM/POS processing.

Technologies/domains: ZIMSWITCH, ISO 8583, TAL, BASE24 BIC ISO, certification, ATM/POS.

PIN Mailer Production System

Scope/contribution: Designed, developed and supported a DES-based PIN mailer production system in C.

Technologies/domains: DES, PIN mailer, C, card operations

Transaction Processing Systems - Telecommunications

Ericsson Subscriber Line Management System

Scope/contribution: SLMS is a TANDEM-based SQL system. The SLMS system captures and monitors telephone fault reports for the only land-phone company in Zimbabwe.

Installed, configured, customised and supported Ericsson's SQL-based SLMS on HP NonStop for telephone fault reporting and monitoring.

Technologies/domains: Ericsson SLMS, HP NonStop, SQL, Pathway, telephone fault management.

Ericsson Directory Access System

Scope/contribution: DAS is a TANDEM Computer SQL-based system. The DAS system captures and searches the PTC subscribers' directory. The system facilitates online directory enquiries for listed telephone numbers, thereby replacing the old manual telephone directory operators.

Installed, configured and supported the Directory Access System for online directory enquiries; developed and modified Pathway SCOBOLX requesters and COBOL servers.

Technologies/domains: Ericsson DAS, HP NonStop, SQL, SCOBOLX, COBOL, Pathway.

Tandem CLX 200 to Tandem K2004 Replacement

Scope/contribution: Supported the replacement of the TANDEM CLX 200 with the TANDEM K2004, including CONFTEXT build, SYSGEN, SUT/IPM installation, hardware components, and X.25/ASYNCH communications.

Technologies/domains: Tandem CLX, Tandem K2004, CONFTEXT, SYSGEN, SUT, IPM, X.25, ASYNCH.

Transaction Processing Systems - Central Africa Building Society (CABS) – Harare, Zimbabwe

BASE24 ATM, Teller and POS Implementation

Scope/contribution: The IPA system integrates authorisation, switching and payments processing onto a single TANDEM platform. Implemented as a front-end interface, it provides virtual connectivity between CABS' varied delivery channels and their critical mainframe, ICL SUN SOLARIS systems. Provided consultancy on BASE24 ATM, Teller and POS solutions for CABS. Developed CSMS and RPQs for HISO, POS/Router Authorisation, SPDH, Refresh and Extract; upgraded software; debugged faults; and connected Verifone POS terminals to HP NonStop systems.

Technologies/domains: CABS, BASE24 ATM/Teller/POS, HISO, POS Router Authorisation, SPDH, Refresh, Extract, Verifone, HP NonStop.

CABS ZIMSWITCH BIC ISO Interface

Scope/contribution: The ZIMSWITCH Interface is a technical interface between the Zimbabwe National Switch (ZIMSWITCH) and participating financial institutions that connect online to process ATM and POS transactions. Developed the ISO 8583-based ZIMSWITCH interbank switch interface using TAL, supporting pre-certification, installation and final certification.

Technologies/domains: CABS, ZIMSWITCH, BIC ISO, ISO 8583, TAL, certification.

Transaction Processing Systems - POS Banking

Verifone MDCII POS Implementations

Scope/contribution: The MDCII system enabled retailers to provide ONLINE links to banks for ONLINE and OFFLINE electronic transaction processing. The system ran on VERIFONE TRANZ terminals and talked to a SPARROW BASE Host system. Widely known and widely used versions of this system include ZIMBANK "PAYLINE", Barclays "PDQ", Standard Chartered Bank, and the CABS POS System.

Installed, configured, customised, and supported Verifone-based MDCII POS systems, enabling online/offline electronic transaction processing for Zimbank Payline, Barclays PDQ, Standard Chartered Bank, and CABS POS environments.

Technologies/domains: Verifone TRANZ, TCL, MDCII, Zimbank Payline, Barclays PDQ, Standard Chartered, CABS POS.

Transaction Processing Systems - Retail POS

Barcode Retail POS System

Scope/contribution: The POS system used VERIFONE TRANZ POS terminals, which interface to a VISUAL BASIC back-office system. The POS terminals used a barcode scanner to capture transactions, which were sent to the VISUAL BASIC back-office system for reconciliation.

Developed, installed and supported a barcode retail POS system using Verifone TRANZ terminals integrated with a Visual Basic back-office system for reconciliation.

Technologies/domains: Verifone TRANZ, barcode scanner, TCL, Visual Basic, Windows 95, reconciliation.

International Computers Limited (ICL) - Zimbabwe

Customer Billing and Monthly Reconciliation System

Scope/contribution: ICL used the system for customer billing and monthly reconciliation. It was SQL-based and ran on an ICL Series 38 system.

Designed and developed a SQL-based customer billing and monthly reconciliation system using Ingres 4GL on ICL Series 38.

Technologies/domains: ICL Series 38, Ingres 4GL, SQL, billing, reconciliation.

Technical Training

Tandem (HP NonStop) Training

- Introduction to System Management.
- Operator Utilities I – Harare, Zimbabwe.
- Operator Utilities II – High Wycombe, UK.
- Pathway Application Programming – Finsbury Square, UK.
- TAL Programming – Finsbury Square, UK.

BASE24 Training – Applied Communications Inc. (ACI)

- BASE24 Overview and Event Management System
- BASE24 Base, Teller, POS and ATM File Maintenance
- Network Environment and Configuration
- Device Control
- External Messages
- MAKE and MAKE Utilities

- **BASE24 Teller, POS and ATM Transaction Processing**
- Settlement and Reporting
- ISO Host Interface
- Refresh and Extract Operations
- XPNET Installation, Configuration, Support and Upgrade

BASE24-eps & Smart Chip Systems

- BASE24-eps (Overview, Configuration, Processing, Scripting)
- ACI Smart Chip Manager (CAM Configuration & Administration)
- Transaction Security Services (TSS)
- Automated Key Distribution System (AKDS) Implementation

Simulation & Testing Tools

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|--|--------------------|
| • Level Four ATM Channel Development Suite | • VERSATEST |
| • ABBREVIEW Astrex Simulator | • Visa Test System |
| • Europay EPS-Net Self-Test Facility | |

ATS and Technical Keyword Bank

Electronic Transaction Processing | Payment Systems | Payments Consultant | BASE24 | BASE24 Classic | BASE24-eps | HP NonStop | Tandem | Guardian | ATM | POS | Teller | Card Issuing | Card Acquiring | Payment Switch | ISO 8583 | EMV | Contactless Payments | Tokenized Payments | Apple Pay | mada Pay | Samsung Pay | Visa | Mastercard | AMEX | Discovery | SAMA | mada | PCI | HISO | SPAN2 | BIC ISO | Finacle | APEX | CORTEX | Postilion | ACI | NCR | Diebold | Verifone | ATM Modernisation | POS Authorisation | ATM Authorisation | Transaction Routing | Settlement | Reconciliation | Extracts | Fraud Management | IBM Safer Payments | ACI PRM | Card Management Systems | AKDS | TSS | XPNET | TMF | TACL | TAL | COBOL | SCOBOL | C | SQL | Enscribe | Banking Technology | Digital Banking | IT Governance | Payment Transformation | System Migration | Technical Architecture | Stakeholder Management | Vendor Management | Programme Management

Executive Positioning Statement

Senior payments technology consultant and banking IT transformation specialist with more than three decades of experience delivering secure, resilient and compliant electronic payment systems. Deep expertise in BASE24, BASE24-eps, HP NonStop, ATM/POS acquiring, ISO 8583, EMV, card scheme certification, mada/SAMA mandates and complex payment platform migration. Strong business and technology alignment capability, supported by doctoral research in business and IT alignment, with a proven record of delivering mission-critical payment solutions for major banks across Saudi Arabia, South Africa and Zimbabwe.