Product Presentation: UnifiedPOS

WINCOR NIXDORF
EXPERIENCE MEETS VISION.

UnifiedPOS
Standard for Retail POS

- UnifiedPOS
- OPOS
- POS for .NET
- JavaPOS

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UnifiedPOS
Standard for Retail POS

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UnifiedPOS Vision

- Common device architecture that is international and extends across vendors, platforms and retail format
- Standards for application to device interfaces in an operating system and language independent manner
- Reduced implementation/development costs for vendors to support multiple (e.g. Windows/COM and Java) platforms because they share the same architecture
- An environment avoiding competition between standards while encouraging competition among implementations
- Allows retailers freedom of choice between OPOS and JavaPOS point of service devices

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UnifiedPOS Goals

- **UnifiedPOS defines**
  - An architecture for application interface to retail devices
  - A set of retail device behaviors sufficient to support a range of POS solutions

- **UnifiedPOS standard will include**
  - The UnifiedPOS Retail Peripheral Architecture overview
  - Text descriptions of the interface to the functions of the device
  - UML terminology & diagrams for each new device category, to describe
    - Relationships between classes/interfaces and objects in the system
    - Basis for creating C++, Java, IDL or other OO technology to implement the UML design

- **UnifiedPOS standard will not include**
  - Specific language API specifications
  - Complete software components. Hardware providers or third-party providers who develop and distribute these components
  - Certification mechanism; will be provided in the near future. Compliance will be measured to OPOS and JavaPOS and conformance to UnifiedPOS

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UnifiedPOS Commitee

- Wincor Nixdorf International GmbH
- Seiko Epson Corporation
- IBM Corporation
- Fujitsu Transaction Solutions, Inc.
- Microsoft Corporation
- NCR Corporation
- Transaction Printer Group, Inc.
- Sun Microsystems, Inc.
- Star Micronics
- RCS
- OPOS-Japan
- Ultimate Technology Corporation
- BearningPoint, Inc.

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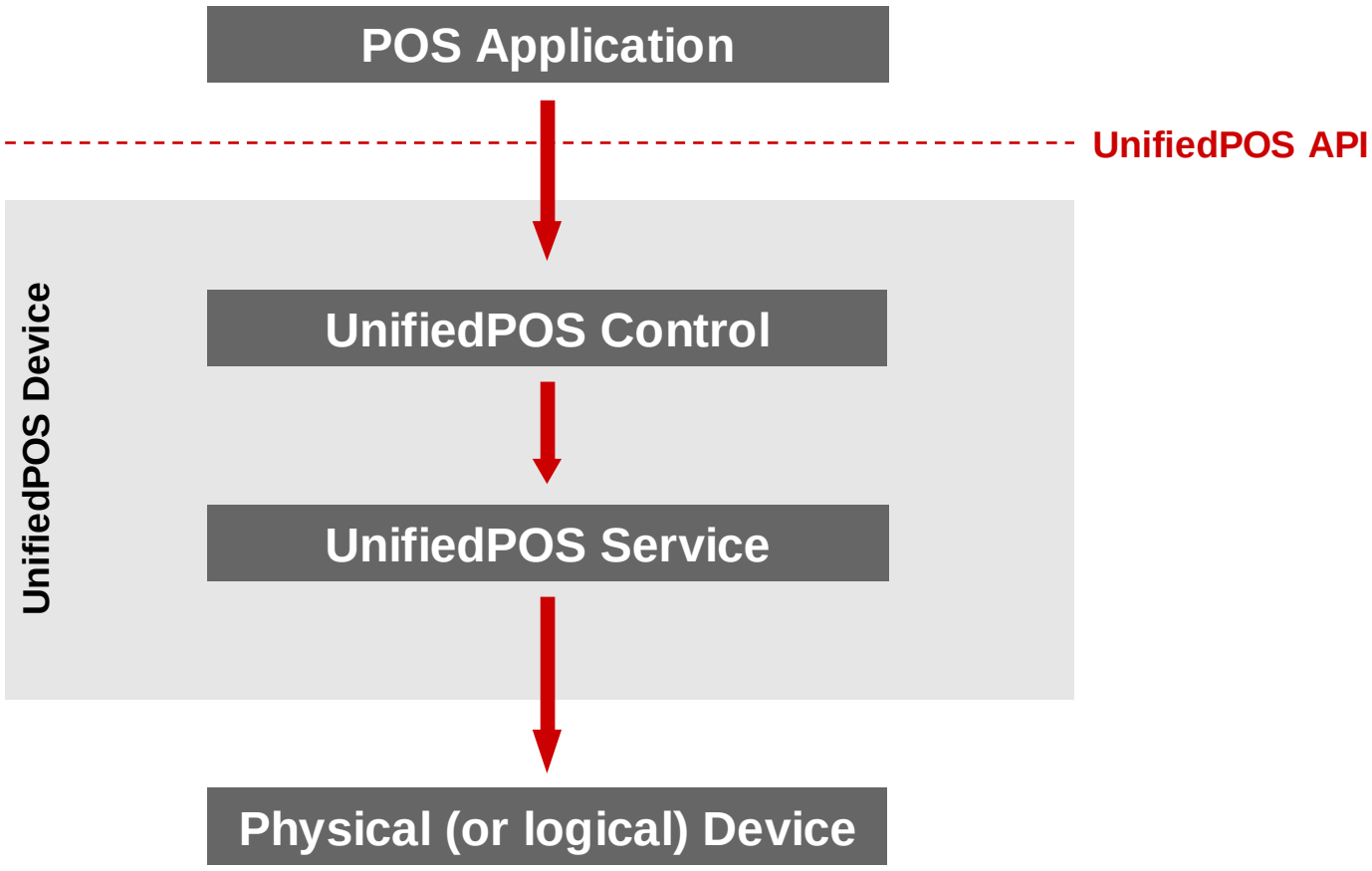
UnifiedPOS Architecture



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UnifiedPOS
Unified Programming Example

UnifiedPOS Programmatic Names	OPOS Programmatic Ids	JavaPOS Class Names
BumpBar	OPOS. BumpBar	jpos. BumpBar
CashChanger	OPOS. CashChanger	jpos. CashChanger
CashDrawer	OPOS. CashDrawer	jpos. CashDrawer
CAT	OPOS. CAT	jpos. CAT
CheckScanner	OPOS. CheckScanner	jpos. CheckScanner
CoinDispenser	OPOS. CoinDispenser	jpos. CoinDispenser
FiscalPrinter	OPOS. FiscalPrinter	jpos. FiscalPrinter
HardTotals	OPOS. HardTotals	jpos. HardTotals
Keylock	OPOS. Keylock	jpos. Keylock
LineDisplay	OPOS. LineDisplay	jpos. LineDisplay
MICR	OPOS. MICR	jpos. MICR
MotionSensor	OPOS. MotionSensor	jpos. MotionSensor
MSR	OPOS. MSR	jpos. MSR
PINPad	OPOS. PINPad	jpos. PINPad
PointCardRW	OPOS. PointCardRW	jpos. PointCardRW
POSKeyboard	OPOS. POSKeyboard	jpos. POSKeyboard
POSPower	OPOS. POSPower	jpos. POSPower
POSPrinter	OPOS. POSPrinter	jpos. POSPrinter
RemoteOrderDisplay	OPOS. RemoteOrderDisplay	jpos. RemoteOrderDisplay
Scale	OPOS. Scale	jpos. Scale
Scanner	OPOS. Scanner	jpos. Scanner
SignatureCapture	OPOS. SignatureCapture	jpos. SignatureCapture
ToneIndicator	OPOS. ToneIndicator	jpos. ToneIndicator

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UnifiedPOS Important Steps (1)

1999	**UnifiedPOS 1.4**	▪ Both the JavaPOS v1.4 and OPOS v1.4 standards are established as conformant platform mappings of the UnifiedPOS specification
2000	**UnifiedPOS 1.5**	▪ Added Point Card Reader Writer Reader Writer ▪ Added POS Power ▪ Significant enhancements to POSPrinter and Cash Changer ▪ Updates to the existing chapters with enhancements, clarifications and corrections to Version 1.4
2001	**UnifiedPOS 1.6**	▪ Enhancements ▪ Fiscal Printer ▪ Line Display ▪ Updates to the existing chapters with enhancements, clarifications and corrections to Version 1.5

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UnifiedPOS
Important Steps (2)

2002	**UnifiedPOS 1.7**	▪ Consolidation of the OPOS, JavaPOS and UnifiedPOS specifications ▪ Added Check Scanner and Motion Sensor ▪ Added Enhanced Line Display (code page mapping) ▪ Added MICR ▪ Added Point Card Reader Writer Reader Writer ▪ Added Printing of Bar Codes by POSPrinters ▪ Added Remote Order Display ▪ Updates to the existing chapters with enhancements, clarifications and corrections to Version 1.6
2003	**UnifiedPOS 1.8**	▪ Added Smart Card Reader Writer device ▪ Added support for Device Statistics (applies to all devices) ▪ Updates to the existing chapters with enhancements, clarifications and corrections to Version 1.7

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UnifiedPOS Important Steps (3)

2005	**UnifiedPOS 1.9**	▪ Added POSPower Extension ▪ Added Firmware Update Common Extensions ▪ Added Electronic Money for CAT ▪ Added Contrast control for CheckScanner ▪ Added Page Mode Printing for POSPrinter ▪ Enhancements ▪ PINPad ▪ Updates to the existing chapters with enhancements, clarifications and corrections to Version 1.8
2006	**UnifiedPOS 1.10**	▪ RFID Reader Writer (proposal) ▪ Electronic Journal (proposal) ▪ Biometrics – Finger Print Scanner (proposal) ▪ POS for .NET appendix ▪ Updates to the existing chapters with enhancements, clarifications and corrections to Version 1.9

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UnifiedPOS Device Classes

- **Bump Bar**
- **Cash Changer**
- **Cash Drawer**
- **CAT** (Credit Authorization Terminal)
- **Check Scanner**
- **Coin Dispenser**
- **Fiscal Printer**
- **Hard Totals**
- **Keylock**
- **Line Display**
- **MICR** (Magnetic Ink Character Recognition Reader)
- **Motion Sensor**
- **MSR** (Magnetic Stripe Reader)
- **PIN Pad**
- **Point Card Reader Writer**
- **POS Keyboard**
- **POS Power**
- **POS Printer**
- **Remote Order Display**
- **Scale**
- **Scanner** (Bar Code Reader)
- **Signature Capture**
- **Smart Card Reader Writer**
- **Tone Indicator**

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OPOS
Standard for Retail POS

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OPOS Vision

"OLE POS provides an open device driver architecture that allowes POS hardware to ...
make it very easy to create POS applications that run in the Microsoft® Windows™ environment"

OLE POS Vision/Scope Dokument, 1994

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OPOS Goals (1)

- **Customers**
  - Choice
    - Best of breed Hardware / Software
  - Quality Solutions
    - Lower cost
    - Rapid application development
    - Provides a level of “certification” of solution
  - Supports retailers on their international track
  - Platform Independence
    - Hardware
    - Operating System

- **Hardware Vendors**
  - Define architecture for Win32-based POS device access
  - Enable peripherals to be used in a wide range of application solutions
  - Standardize the interface to POS hardware

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OPOS Goals (2)

- **Application Vendors**
  - Easier development
    - Enable big POS applications for the Win32 platforms
  - Rapid Development
    - Independent SW Vendors (ISV`s) can focus on application development
  - Multi-vendor
    - Applications can plug-n-play multiple vendor POS hardware

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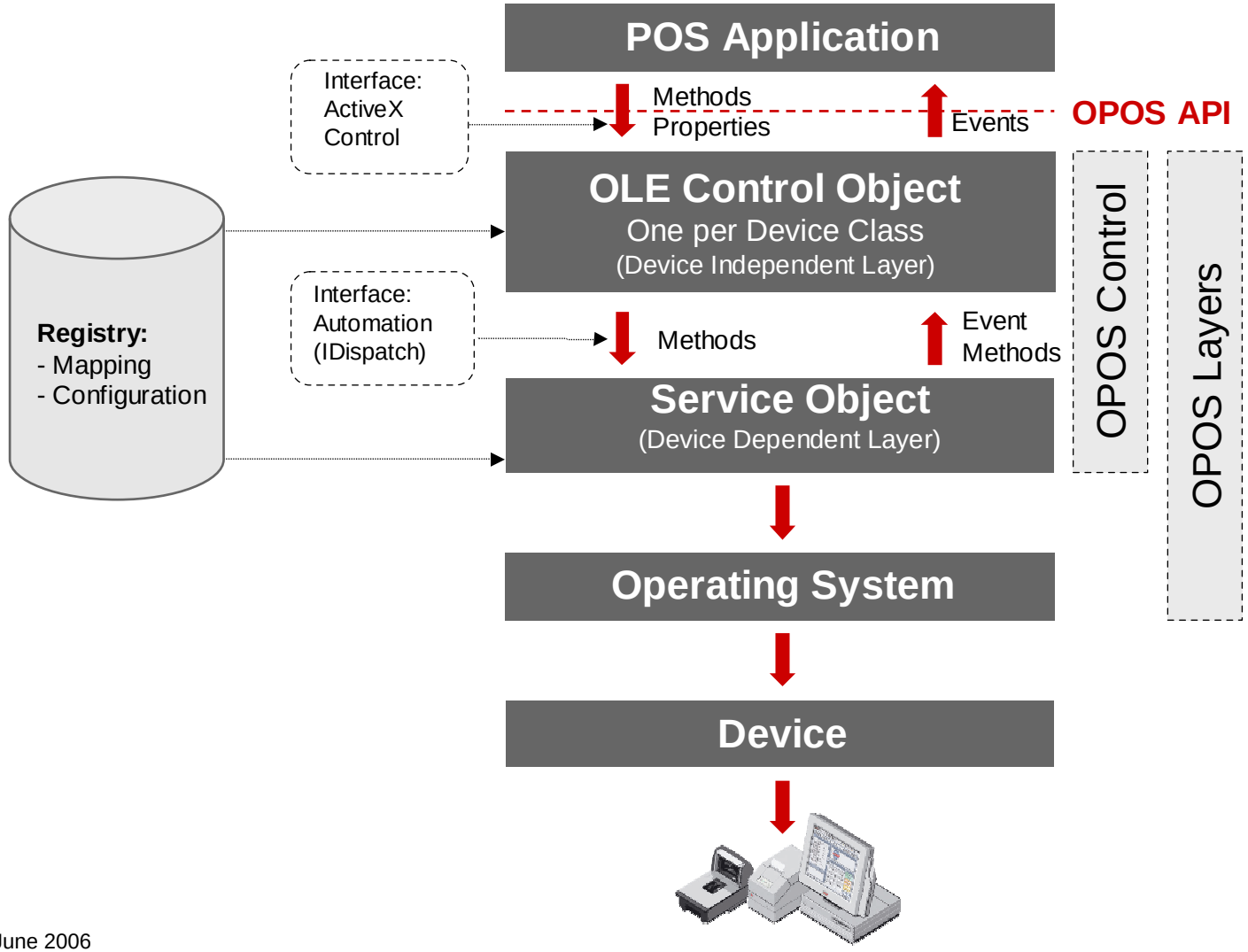
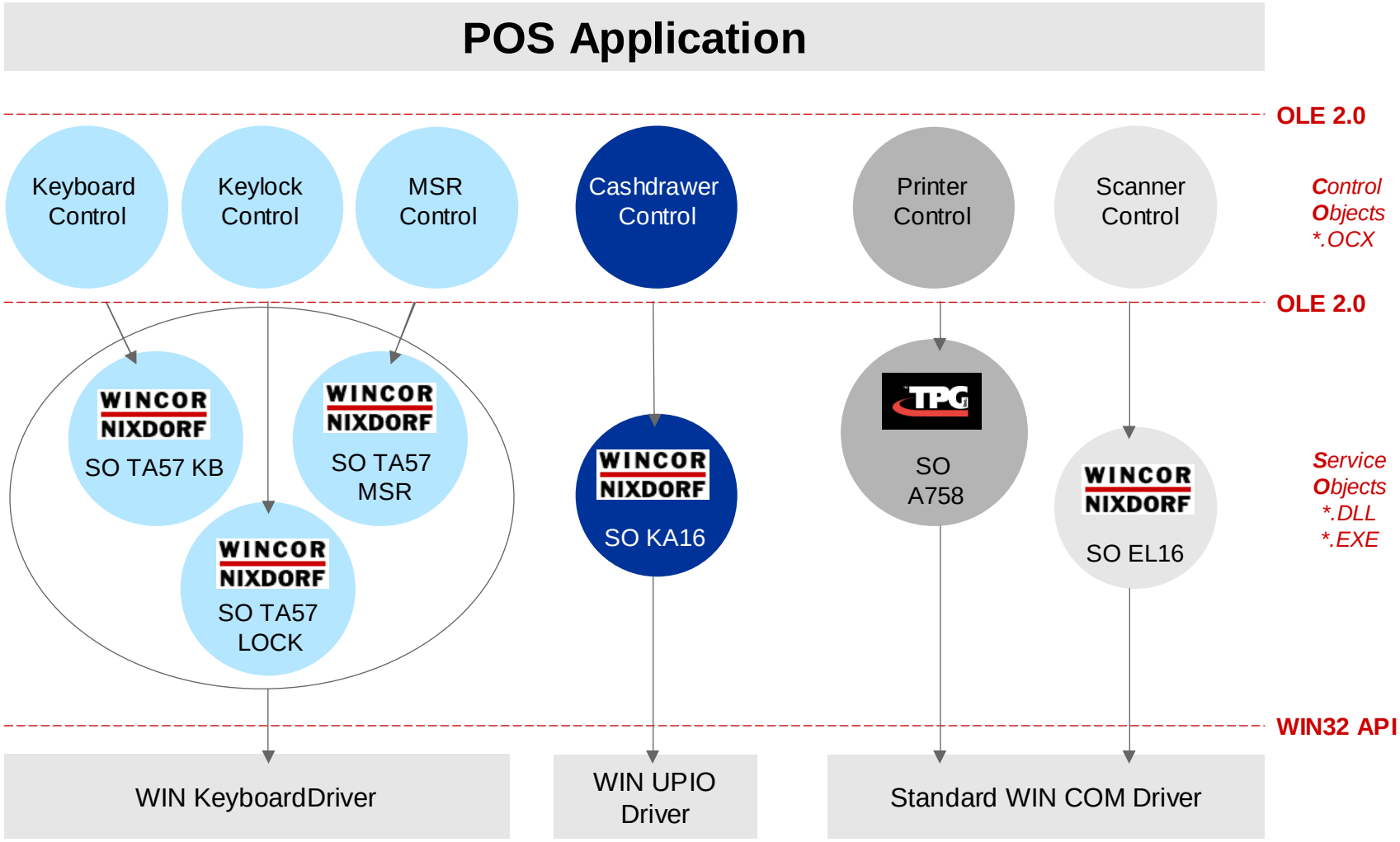
OPOS Architecture



OPOS Configuration Example



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OPOS
Important Steps

1994	▪ Initial OPOS concept meeting
1996	▪ Formation of OPOS Europe WINCOR NIXDORF FUJITSU Microsoft olivetti • Definition and Extension Fiscal printer • Definition for calculating scales • Extension on definition keyboard device • Definition POSPower
1996	▪ Wincor Nixdorf demonstrated OPOS technology at the Retail Solution Fair in Birmingham
2002	▪ Beginning with release 1.7, only the UnifiedPOS document is released. Separate OPOS and JavaPOS documents are no longer maintained. See the UnifiedPOS page http://www.nrf-arts.org/UnifiedPOS/default.htm

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OPOS Release History (1)

1995	**OPOS 1.0**	
1996	**OPOS 1.1**	WINCOR NIXDORF ▪ Added POSKeyboard ▪ Enhancements • POSPrinter
1997	**OPOS 1.2**	▪ Added Cash Changer and Tone Indicator ▪ Enhancements • POSKeyboard
1998	**OPOS 1.3**	WINCOR NIXDORF ▪ Added Fiscal Printer ▪ *Added Bump Bar* ▪ *Added PIN Pad* ▪ *Added Remote Order Display* ▪ Added Power Reporting ▪ Added Price Calculating Scale

Cursive Text => not part of OPOS version released by Wincor Nixdorf!

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OPOS Release History (2)

1994	**OPOS 1.4**	▪ Added CAT (Credit Authorization Terminal)
1996	**OPOS 1.5**	▪ Added Point Card Reader Writer Reader Writer ▪ Added POS Power • Enhancements • POS Printer • Cash Changer
1996	**OPOS 1.6**	WINCOR NIXDORF ▪ Enhancements • Fiscal Printer • Line Display
2002	**UnifiedPOS (OPOS) 1.7**	▪ Details see UnifiedPOS slide

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OPOS
Release History (3)

2003	**UnifiedPOS (OPOS) 1.8**	▪ Details see UnifiedPOS slide
2005	**UnifiedPOS (OPOS) 1.9**	▪ Details see UnifiedPOS slide
2006	**UnifiedPOS (OPOS) 1.10**	▪ Details see UnifiedPOS slide

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OPOS Environment

- **Operating Systems**
  - Windows XP Professional / Windows XP Embedded
  - Windows 2000
  - Windows NT 4.0 SP6a
  - Windows 98SE
- **Application Tools must support 32-bit OLE Controls**
  - 32bit OLE is the enabling technology
- **Development Tools**
  - Microsoft Visual Studio .NET
  - Borland Delphi
  - Microsoft VBA Solutions (MS Access, MS Excel, etc.)
  - Micro Focus Object COBOL Developer Suite
- **OPOS Application Integration**
  - Native MFC Application
  - Native Windows Application
  - Console Applications
    - Simple DOS C Program
    - Background Process for OPOS in MFC

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OPOS 1.6
Device Classes

- **Bump Bar**
- **Cash Changer**
- **Cash Drawer**
- **CAT** (Credit Authorization Terminal)
- **Coin Dispenser**
- **Fiscal Printer**
- **Hard Totals**
- **Keylock**
- **Line Display**
- **MICR** (Magnetic Ink Character Recognition Reader)
- **MSR** (Magnetic Stripe Reader)
- **PIN Pad**
- **Point Card Reader Writer**
- **POS Keyboard**
- **POS Power**
- **POS Printer**
- **Remote Order Display**
- **Scale**
- **Scanner** (Bar Code Reader)
- **Signature Capture**
- **Tone Indicator**

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Wincor Nixdorf OPOS

... open device driver architecture for
Wincor Nixdorf peripheral devices
in more than 100.000 installations

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Wincor Nixdorf OPOS 1.6 Device Classes

- **Cash Drawer**
- **Fiscal Printer**
- **Hard Totals**
- **Keylock**
- **Line Display**
- **MICR** (Magnetic Ink Character Recognition Reader)
- **MSR** (Magnetic Stripe Reader)
- **POS Keyboard**
- **POS Power**
- **POS Printer**
- **Scale**
- **Scanner** (Bar Code Reader)

All Wincor Nixdorf Control Objects have a built-in trace facility

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Wincor Nixdorf OPOS 1.6A20 Service Objects (1)

- **Cash Drawers**
  - Wincor Nixdorf Cash Drawer at TPG (former AXIOHM) Printer 756, 793
  - Wincor Nixdorf Cash Drawer at TPG (former AXIOHM) Printer 758, 794
  - Wincor Nixdorf Cash Drawer at ND69, ND77, ND210
  - Wincor Nixdorf Cash Drawer at BEETLE Port or COM
  - Wincor Nixdorf Cash Drawer at TransAct Printer POSjet 1000
  - Wincor Nixdorf Cash Drawer at Fiscal Printers

- **Line Displays**
  - Wincor Nixdorf Line Displays BA63 and BA66 at COM port
  - Wincor Nixdorf Line Display BA63 at USB
  - Wincor Nixdorf Line Displays BA63 and BA66 at NDxxx
  - Wincor Nixdorf Line Display BA63 (KATAKANA char set)
  - Wincor Nixdorf Line Display BA63 at Fiscal Printers

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Wincor Nixdorf OPOS 1.6A20 Service Objects (2)

- **POS Printer**
  - TPG (former AXIOHM) 756, 793 (SO from Wincor Nixdorf)
  - TPG (former AXIOHM) 758, 794 (SO from Axiohm)
  - Wincor Nixdorf ND69, ND77, ND210
  - Wincor Nixdorf TH22
  - TransAct POSjet1000 (SO from TransAct)
- **Fiscal Printer**
  - Wincor Nixdorf ND77 for Italy, Hungary, Greece and Poland
- **Scanner**
  - All Scanners, which follow the Wincor Nixdorf Scanner Protocol
- **POS Keyboard + Keylock + MSR**
  - Wincor Nixdorf TA57, 58, 61, 64, 84, 85
  - Waiter Keylock (Wincor Nixdorf Keyboards TA64, TA84)

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Wincor Nixdorf OPOS 1.6A20 Service Objects (3)

- **Hard Totals**
  - Implementation via Disk File
- **Caluculating Scales**
  - Calculating Scales with EC aproval based on Checkout Dialog 6
- **POS Power**
  - BEETLE built-in UPS MPS-1064 (Windows NT based only)
- **MICR**
  - TPG (former AXIOHM) 756 (SO from Wincor Nixdorf)
  - TPG (former AXIOHM) 758 (SO from TPG (former AXIOHM))

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Wincor Nixdorf OPOS 1.6A20 Tools

- **ONLINE Help**
- **Registration Tool: text2reg.exe**
- **OPOS Configuration Tools**
  - RSSConf.exe for WN Service Objects
  - PcOS.exe for TransAct POSjet1000
- **Run Time Diagnostic**
- **Visual Basic Sample Code for accessing on OPOS devices**
  - POS Printer, Cash Drawer, MICR, Fiscal Printer, Scanner, POS Keyboard, Keylock, MSR, Line Display, Hard Totals, Scale, POS Power

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Wincor Nixdorf OPOS 1.6B00 Service Objects (1)

- **Includes all updates of existing Service Objects**

- **Cash Drawers**
  - Wincor Nixdorf Cash Drawer at TPG (former AXIOHM) Printer 756, 793
  - Wincor Nixdorf Cash Drawer at TPG (former AXIOHM) Printer 758, 794
  - Wincor Nixdorf Cash Drawer at ND69, ND77, ND210
  - Wincor Nixdorf Cash Drawer at BEETLE Port or COM
  - Wincor Nixdorf Cash Drawer at TransAct Printer POSjet 1000
  - Wincor Nixdorf Cash Drawer at Fiscal Printers
  - Wincor Nixdorf Cash Drawer at TH210, TH320, TH420
  - Wincor Nixdorf Cash Drawer at ND77 and MF-THF Romania
  - Wincor Nixdorf Cash Drawer at MF-THF and MF-EJ-THF Italy
  - Wincor Nixdorf Cash Drawer at MF-EJ 210 for Hungary/Greece/Czech Republic

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Wincor Nixdorf OPOS 1.6B00 Service Objects (2)

- **Line Displays**
  - Wincor Nixdorf Line Display BA63 (USB) and BA66 (USB)
  - Wincor Nixdorf Line Displays BA63 and BA66 at COM port
  - Wincor Nixdorf Line Displays BA63 and BA66 at NDxxx
  - Wincor Nixdorf Line Display BA63 (KATAKANA char set)
  - Wincor Nixdorf Line Display BA63 at all Wincor Nixdorf Fiscal Printers

- **Fiscal Printer**
  - Wincor Nixdorf ND77 for Italy, Hungary, Greece, Poland and Romania
  - MF-THF for Romania and Italy
  - Wincor Nixdorf MF-EJ-THF for Italy
  - Wincor Nixdorf MF-EJ210 for Hungary, Greece and Czech Republic

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Wincor Nixdorf OPOS 1.6B00 Service Objects (3)

- **POS Printer**
  - TPG (former AXIOHM) 756, 793 (SO from Wincor Nixdorf)
  - TPG (former AXIOHM) 758, 794 (SO from TPG (former AXIOHM))
  - Wincor Nixdorf TP07 (USB), TH21, IJ200
  - Wincor Nixdorf TH210 (COM/USB), TH320/420 (COM)
  - Wincor Nixdorf ND69, ND77, ND210
  - Wincor Nixdorf TH22
  - TransAct POSjet1000 (SO from TransAct)

- **POS Power**
  - APC Smart UPS 700
  - BEETLE built-in UPS MPS-1086

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Wincor Nixdorf OPOS 1.6B00 Service Objects (4)

- **Scanner**
  - All Scanners, which follow the Wincor Nixdorf Scanner Protocol
  - USB HID Scanner
- **MICR**
  - Wincor Nixdorf TH320, TH420 (COM)
- **POS Keyboard + Keylock + MSR**
  - Wincor Nixdorf TA57, TA58(P), TA59, TA60, TA61, TA64, TA84, TA85(P)
  - Waiter Keylock (Wincor Nixdorf Keyboards TA64, TA84)

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Wincor Nixdorf OPOS Preview

OPOS 1.7 / 1.8 / 1.9

- No Wincor Nixdorf customer request for (OPOS) 1.7 / 1.8 / 1.9 functionalities
  - Currently no OPOS release 1.7 / 1.8 / 1.9 planning

POS for .NET

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POS for .NET Vision

"POS for .NET is a class library that provides an open device driver architecture that allows Point-of-Service ("POS") hardware to be easily integrated into POS systems based on Microsoft's Next Generation XP Windows Operating System, WEPOS. It is an implementation of the UnifiedPOS Standard based upon the Microsoft Operating System Software utilizing the .NET Framework Architecture."

UnifiedPOS Retail Peripheral Architecture Document, 2005

WINCOR NIXDORF
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POS for .NET Goals

- „Defining an architecture for Win32-based POS device access for the .NET Framework, while maintaining a close relationship to certain aspects of the existing OPOS implementation of the UnifiedPOS specification.
- Defining a set of POS device interfaces sufficient to support a range of POS applications that incorporate the UnifiedPOS device abstraction. The benefits of the .NET Framework extensions aid in the management of these devices.
- Provide for a migration path for legacy (existing) OPOS device services to function under the .NET Framework, albeit without all of the feature rich functionality that the .NET Framework potentially offers.“

UnifiedPOS Retail Peripheral Architecture Document, 2005

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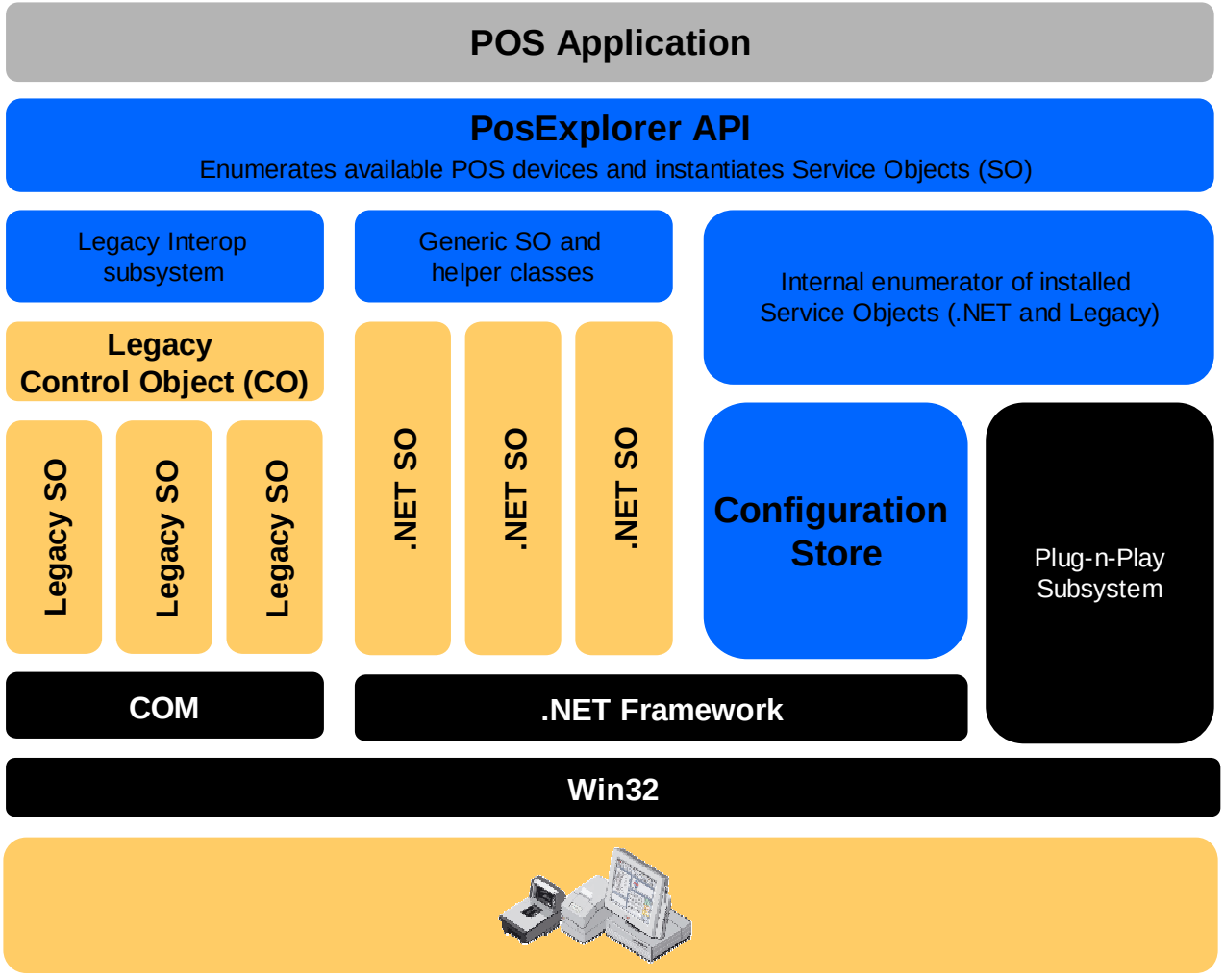
POS for .NET Architecture



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POS for .NET
Important Steps

2006	**POS for .NET 1.10**	▪ Supports legacy (COM-based) COs/SOs ▪ API for enumeration of POS devices ▪ Exposes plug-n-play notifications as UPOS-like events ▪ Exposes device statistics as PerfMon counters ▪ Instantiation of service objects

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POS for .NET Environment

- **Operating Systems**
  - Windows XP Professional
  - Windows XP Embedded
  - WEPOS
- **Development Tools**
  - Microsoft Visual Studio .NET
  - Microsoft .NET Framework Version 1.1

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POS for .NET 1.10
Device Classes

- **Bump Bar**
- **Biometrics**
- **Cash Changer**
- **Cash Drawer**
- **CAT** (Credit Authorization Terminal)
- **Check Scanner**
- **Coin Dispenser**
- **Electronic Journal**
- **Fiscal Printer**
- **Hard Totals**
- **Keylock**
- **Line Display**
- **MICR** (Magnetic Ink Character Recognition Reader)
- **Motion Sensor**
- **MSR** (Magnetic Stripe Reader)
- **PIN Pad**
- **Point Card Reader Writer**
- **POS Keyboard**
- **POS Power**
- **POS Printer**
- **Remote Order Display**
- **Scale**
- **Scanner** (Bar Code Reader)
- **Signature Capture**
- **Smart Card Reader Writer**
- **Tone Indicator**

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Wincor Nixdorf POS for .NET

... open device driver architecture for the
Microsoft WEPOS platform and
Wincor Nixdorf peripheral devices

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Wincor Nixdorf POS for .NET 1.10 Device Classes

- **Cash Drawer**
- **Keylock**
- **Line Display**
- **MICR** (Magnetic Ink Character Recognition Reader)
- **MSR** (Magnetic Stripe Reader)
- **POS Keyboard**
- **POS Printer**
- **Scanner** (Bar Code Reader)

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JavaPOS
Standard for Retail POS

WINCOR NIXDORF
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JavaPOS Vision

“Produce a Retail Industry standard for a Point-Of-Sale I/O device subsystem that supports pure Java applications and leverages the OPOS standard.”

JavaPOS Komitee

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JavaPOS Goals (1)

- **Customers**
  - Choice
    - Best of breed Hardware / Software
  - Quality solutions
    - Lower cost
    - Rapid application development
    - Provides a level of “certification” of solution
  - Supports retailers on their international track
  - Platform Independence
    - Hardware
    - Operating System
  - Reduced POS Terminal Costs
    - Reduced administration costs of thin clients

- **Hardware Vendors**
  - Define an architecture for POS device access from Java applications
  - Enable peripherals to be used in a wide range of application solutions
  - Standardize the interface to POS hardware

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JavaPOS Goals (2)

- **Application Vendors**
  - Easier development
    - Enable big POS applications for the Java platform
    - Re-Useability (Derive the Java APIs from OPOS)
  - Rapid Development
    - Independent SW Vendors (ISV`s) can focus on application development
  - Multi-vendor
    - Applications can plug-n-play multiple vendor POS hardware

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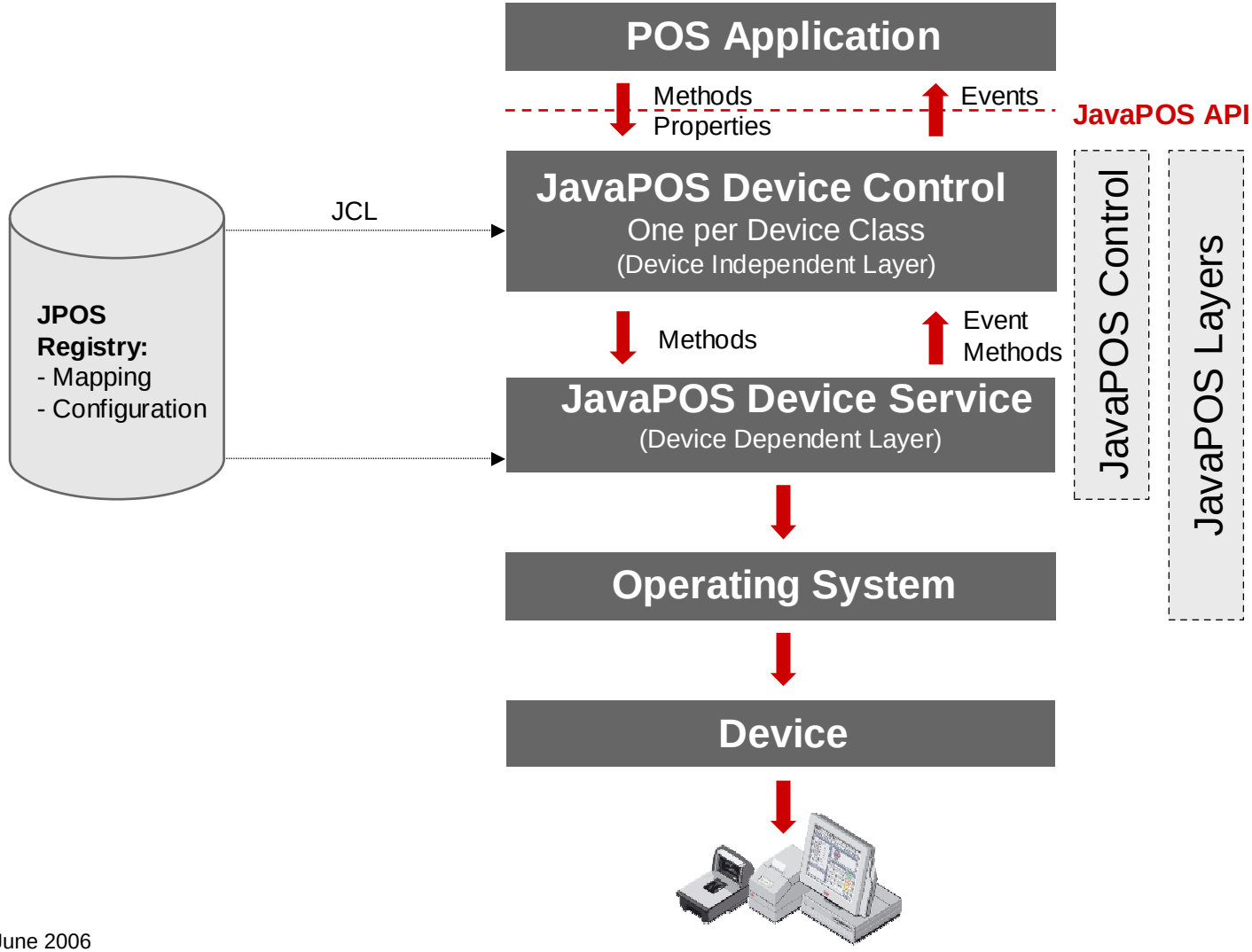
JavaPOS Architecture



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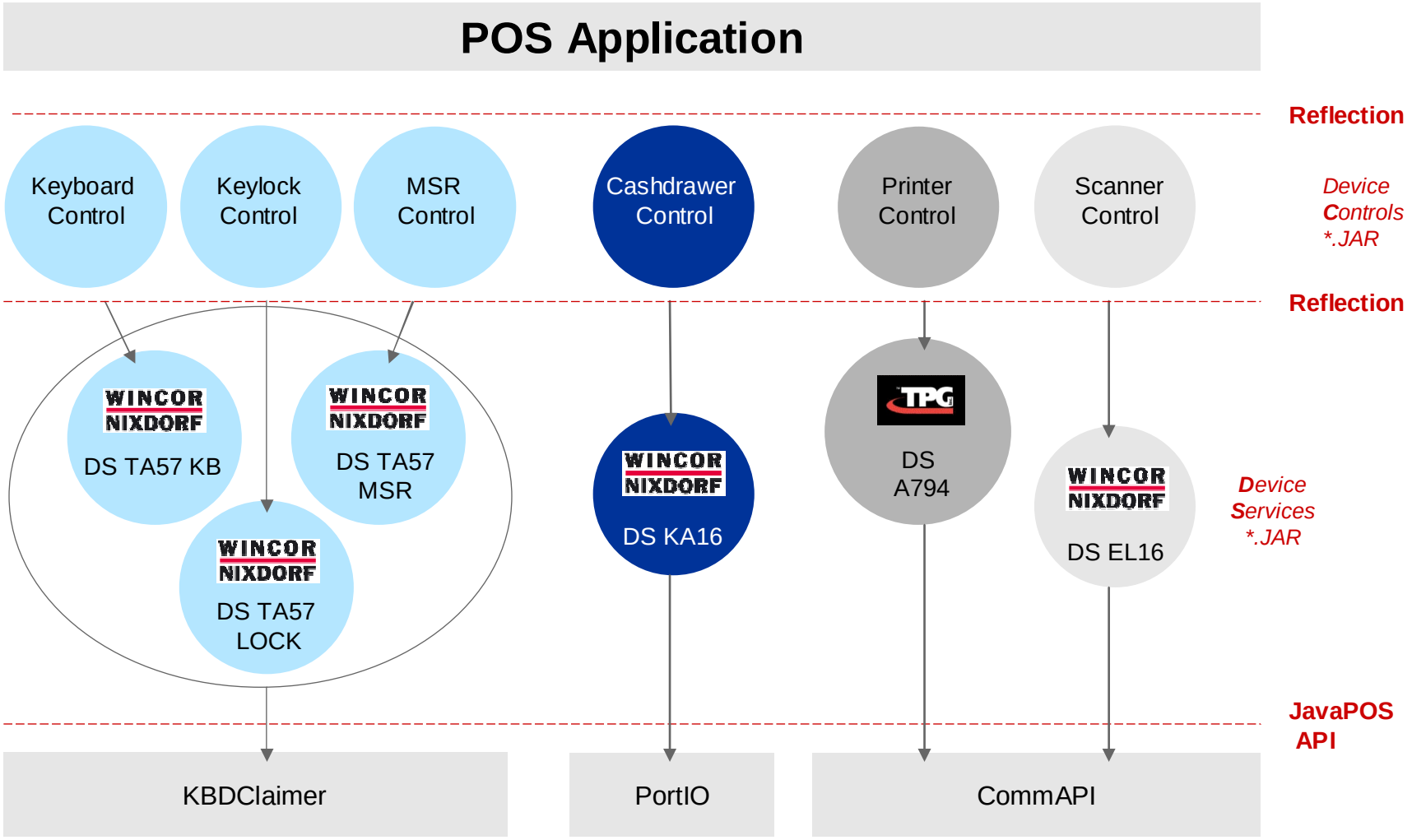
JavaPOS Configuration Example



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JavaPOS
Important Steps

1997	▪ Initial JavaPOS committee meeting
1998	▪ Public demonstrations at National Retail Federation (NRF)
2000	▪ JavaPOS was recognized as the official Java platform mapping of the UnifiedPOS standard of NRF
2001	▪ Wincor Nixdorf has upgraded its JavaOPOS Wrapper (JOWE) to JavaPOS v1.5
2002	▪ Beginning with release 1.7, only the UnifiedPOS document is released. Separate OPOS and JavaPOS documents are no longer maintained (UnifiedPOS)

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JavaPOS Release History (1)

1997		▪ JavaPOS Guide for Application and Device Programmers is published for public review
1998	**JavaPOS 1.2**	
1998	**JavaPOS 1.3**	▪ Price Calculating Scale ▪ *Added Bump Bar* ▪ *Added Fiscal Printer* ▪ *Added PIN Pad* ▪ *Added Remote Order Display* ▪ *Added Power Reporting*
1999	**JavaPOS 1.4**	▪ *Added CAT (Credit Authorization Terminal)*

Cursive Text => not part of OPOS version released by Wincor Nixdorf!

WINCOR NIXDORF
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JavaPOS Release History (2)

2002	**JavaPOS 1.5**	WINCOR NIXDORF ▪ *Added Point Card Reader Writer Reader Writer* ▪ *Added POS Power* ▪ Enhancements • POSPrinter • *Cash Changer*
2001	**JavaPOS 1.6**	▪ Enhancements • Fiscal Printer • Line Display
2002	**UnifiedPOS (JavaPOS) 1.7**	▪ Details see UnifiedPOS slide
2003	**UnifiedPOS (JavaPOS) 1.8**	▪ Details see UnifiedPOS slide
2005	**UnifiedPOS (JavaPOS) 1.9**	▪ Details see UnifiedPOS slide

Cursive Text => not part of OPOS version released by Wincor Nixdorf!

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JavaPOS 1.5 Environment (1)

- **Operating Systems**
  - Red Hat Linux 7.2
  - Red Hat Linux 7.3
  - Red Hat Linux 8.0
  - Red Hat Linux 9.0
  - Windows XP Professional / Windows XP Embedded
  - Windows 2000
  - Windows NT 4.0 SP6a

- **Development Tools**
  - Microsoft Visual Studio .NET
  - Eclipse
  - Borland JBuilder

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JavaPOS 1.5 Environment (2)

- **Hardware Requirements**
  - CPU: ≥ 50 MHz
  - RAM: ≥ 64 MB
- **Software Requirements**
  - Windows NT/2000/XP/XP Embedded
    - Version ≥ NT 4.0 SP6a
    - Java Virtual Machine JRE 1.1.8 (Sun)
    - Java Virtual Machine ≥ JRE 1.2.2 (Sun)
  - Linux
    - Version ≥ 7.2 mit kernel 2.4.7-10
    - C Libraries: ≥ glibc-2.2.4-13
    - XFree86 ≥ 4.10-3
    - Java Virtual Machine Version JRE 1.1.8 (IBM)
    - Java Virtual Machine ≥ Version JRE 1.2.2 (Sun)

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JavaPOS 1.5
Device Classes

- **Bump Bar**
- **Cash Changer**
- **Cash Drawer**
- **CAT** (Credit Authorization Terminal)
- **Coin Dispenser**
- **Fiscal Printer**
- **Hard Totals**
- **Keylock**
- **Line Display**
- **MICR** (Magnetic Ink Character Recognition Reader)
- **MSR** (Magnetic Stripe Reader)
- **PIN Pad**
- **Point Card Reader Writer**
- **POS Keyboard**
- **POS Power**
- **POS Printer**
- **Remote Order Display**
- **Scale**
- **Scanner** (Bar Code Reader)
- **Signature Capture**
- **Tone Indicator**

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Wincor Nixdorf JavaPOS

... open device driver architecture for
Wincor Nixdorf peripheral devices

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Wincor Nixdorf JavaPOS 1.5 Device Classes

- Bump Bar
- Cash Changer
- Cash Drawer
- CAT (Credit Authorization Terminal)
- Coin Dispenser
- Fiscal Printer
- Hard Totals
- Keylock
- Line Display
- MICR (Magnetic Ink Character Recognition Reader)
- MSR (Magnetic Stripe Reader)
- PIN Pad
- Point Card Reader Writer
- POS Keyboard
- POS Power
- POS Printer
- Remote Order Display
- Scale
- Scanner (Bar Code Reader)
- Signature Capture
- Tone Indicator

All Wincor Nixdorf control objects have a built-in trace facility

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Wincor Nixdorf JavaPOS 1.5 Device Services (1)

- **POS Printer**
  - Wincor Nixdorf ND77 (RS232)
  - TPG (former AXIOHM) A794 (RS232)
  - TPG (former AXIOHM) A758 (RS232)
- **Cash Drawer**
  - Wincor Nixdorf Cash Drawer to ND77
  - Wincor Nixdorf Cash Drawer to BEETLE Cash Drawer Port
- **POS Keyboard + Keylock + MSR**
  - Wincor Nixdorf TA57, TA58, TA61, TA64, TA84, TA85
- **Displays**
  - Wincor Nixdorf Line Display BA63/BA66 at BEETLE COM Port/ND77

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Wincor Nixdorf JavaPOS 1.5 Device Services (2)

- **Scanner**
  - All Wincor Nixdorf Mode A and B compatible RS232-Scanner
- **Scale**
  - Scales using CHECKOUT DIALOG 2 and CHECKOUT DIALOG 6 (WELMEC compliant)
- **Hard Totals**
  - Implemention via Disk File

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Wincor Nixdorf JavaPOS 1.5 Tools

- **Complet Set of Controls**
- **JCL Implemention**
  - supporting XML configurations files and also property files for thin configuration storage
- **Device Services of Wincor Nixdorf Hardware**
  - CommAPI for Serial Ports included
- **Sample programs for development training**
- **Test program JaRTPack for simple tests and expert tests**
- **Technical description in HTML**
- **trace support for application development**
- **Diagnostic support after deployment in field for all JavaPOS device classes**
  - Remote access via browser possible
- **Remote configuration of JavaPOS devices with browser**

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JavaPOS 1.7B
System Requirements

- **Hardware Requirements**
  - RAM: ≥ 128 MB

- **Software Requirements**
  - Windows NT 4.0 SP6a / 2000 / XP / XP Embedded
    - Java Virtual Machine ≥ JRE 1.3.1 (Sun)

      ➔ Recommended JRE 1.4.2.9

  - Red Hat Linux Version 9.0
  - Red Hat Linux Version 7.2 (project request)
  - Red Hat Linux Version 7.3 (project request)
  - Red Hat Linux Version 8.0 (project request)
    - Java Virtual Machine ≥ JRE 1.3.1 (Sun)

      ➔ Recommended JRE 1.4.2.9

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Wincor Nixdorf JavaPOS 1.7B Device Services (1)

- **Includes all updates of existing Device Services**

- **POS Printer**
  - Wincor Nixdorf ND77 (RS232)
  - Wincor Nixdorf ND210 (RS232)
  - Wincor Nixdorf TH210/TH220 (USB/RS232)
  - Wincor Nixdorf TH320/TH420 (USB/RS232/MICR)
  - Wincor Nixdorf TP07 (USB)
  - TPG (former AXIOHM) A795 (RS232)
  - TPG (former AXIOHM) A794 (RS232)
  - TPG (former AXIOHM) A758 (RS232)

- **Cash Drawer**
  - Wincor Nixdorf Cash Drawer to BEETLE Cash Drawer Port
  - Wincor Nixdorf Cash Drawer to ND77
  - Wincor Nixdorf Cash Drawer to ND210
  - Wincor Nixdorf Cash Drawer to TH210/TH220
  - Wincor Nixdorf Cash Drawer to TH320/TH420

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Wincor Nixdorf JavaPOS 1.7B Device Services (2)

- **Line Displays**
  - Wincor Nixdorf Line Display BA63/BA66 at BEETLE COM Port/ND77
  - Wincor Nixdorf Line Display BA63/BA66 at USB
  - Wincor Nixdorf Line Displays BA63 and BA66 at NDxxx
  - Wincor Nixdorf Line Display BA63 at Fiscal Printer ND77 Italy
- **Scanner**
  - All Wincor Nixdorf Mode A and B compatible RS232-Scanner
  - USB HID-Scanner
  - SE3223 (RS232)
- **Fiscal Printer**
  - Wincor Nixdorf ND77 for Italy
  - MF-THF and MF-EJ-THF Italy
- **POS Keyboard + Keylock + MSR**
  - Wincor Nixdorf TA57, TA58(P), TA60, TA61, TA64, TA84, TA85(P)

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Wincor Nixdorf JavaPOS 1.7B Device Services (3)

- **MSR**
  - Swipe and Park Reader 7816 (nur Swipe Card)
- **Scale**
  - Scales using CHECKOUT DIALOG 2 and CHECKOUT DIALOG 6 (WELMEC compliant)
- **Hard Totals**
  - Implemention via Disk File
- **Tone Indicator**
  - BEETLE built-in loudspeaker

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Wincor Nixdorf JavaPOS 1.7B Device Services (4)

- **POS Power**
  - MPS-1086 (project request)
  - BEETLE built-in UPS MPS-1064
- **Some minor extensions of the new standard version 1.7**
  - Codepage Mapping, etc.
- **JavaPOS configuration extension: multiple configuration files**

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Wincor Nixdorf JavaPOS Preview (1)

JavaPOS 1.7C

- **Includes all updates of existing Device Services**
- **New Device Services**
  - POS Printer
    - Wincor Nixdorf TH230
    - Wincor Nixdorf TP07 compact
  - POS Power
    - BEETLE built-in UPS MPS-1086
  - RF ID Tag Reader
  - iScan Peripherals
- **CIM Support for iScan devices**

Vielen Dank für Ihre Aufmerksamkeit