



Java Card™ Platform for Retail

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Java Card™ fits Banking

? The GlobalPlatform Specifications propelled Java Card™ in the banking segment

- Original Open Platform 1.0 specification (designed by Visa)
- Approval processes adapted to Java Card banking (Visa Risk Management, MasterCard CAST)
 - Visa licenses VSDC applet
 - MasterCard provides M/Chip 4 applet reference implementation

? Java Card™ S program reinforces market pull

- Cost-effective alternative facing native solutions
- Smooth migration to true multi-application
- Endorsed by banking organizations for EMV migration



Java Card™ also fits Contactless Banking

- ? Specification convergence: MasterCard PayPass specification adopted by Visa
- ? Approval processes now in place for Java Card contactless (digital and analog testing)
- ? Performance challenges now overcome
 - Visa Wave transaction in less than 0.5s (Tap & Pay)
- ? Pure contactless and dual interface cards hold great promise for Java Card banking
 - Visa Wave program in AP
 - PayPass programs in the US



Success story in Japan: VISTA chip

? VISTA Alliance

- Visa
- Infineon Technologies
- Sony Corporation
- Trusted Logic

? Project launched at Cartes 2002 in Paris

? 18-months development & approval cycle

? Dual-interface card with double Operating System

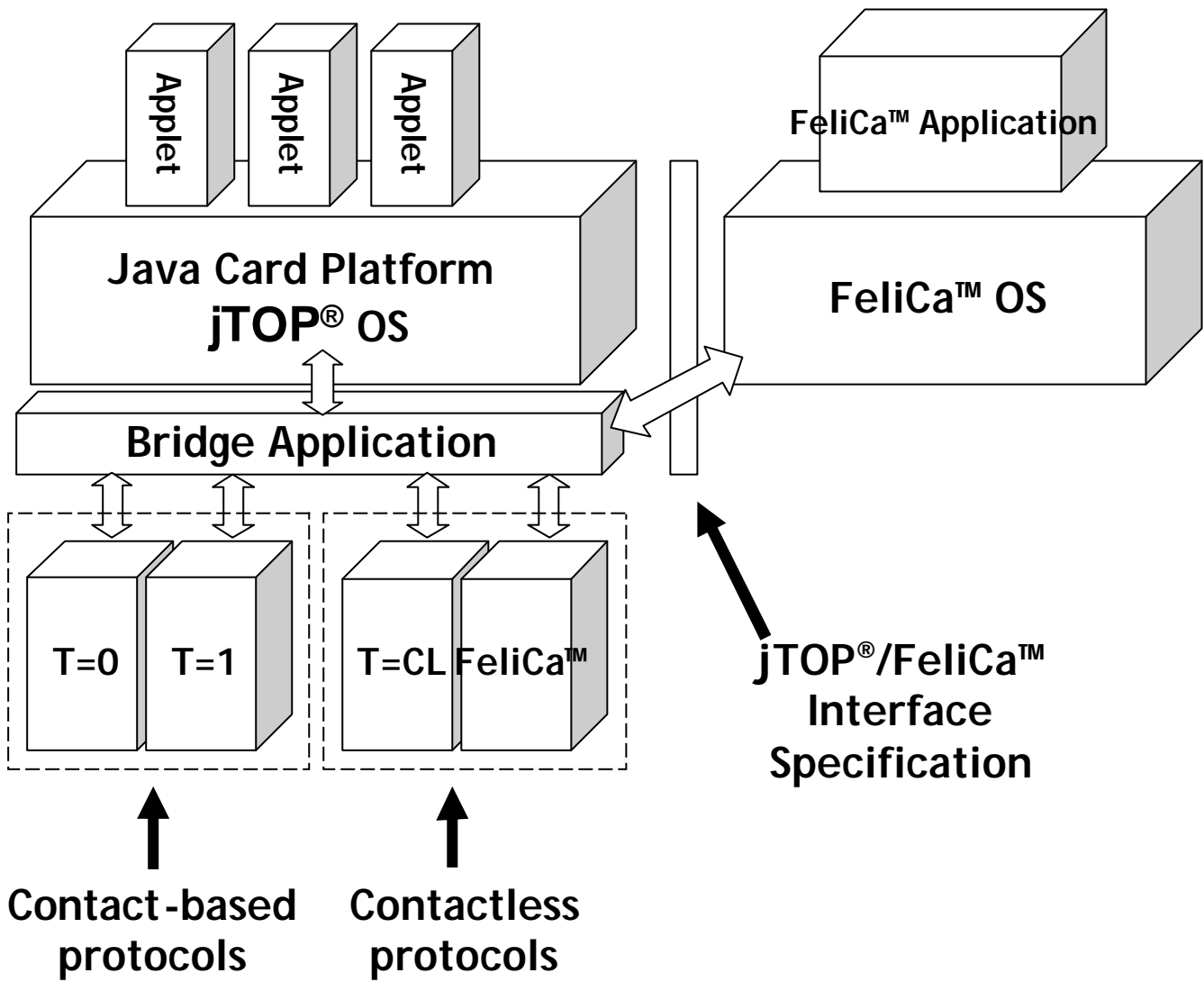
- Java Card platform (jTOP[®] OS) from Trusted Logic
- FeliCa[™] OS from Sony Corporation

? Dual-purpose card

- Contact-based banking with Java Card applications
- Contactless retail with FeliCa applications

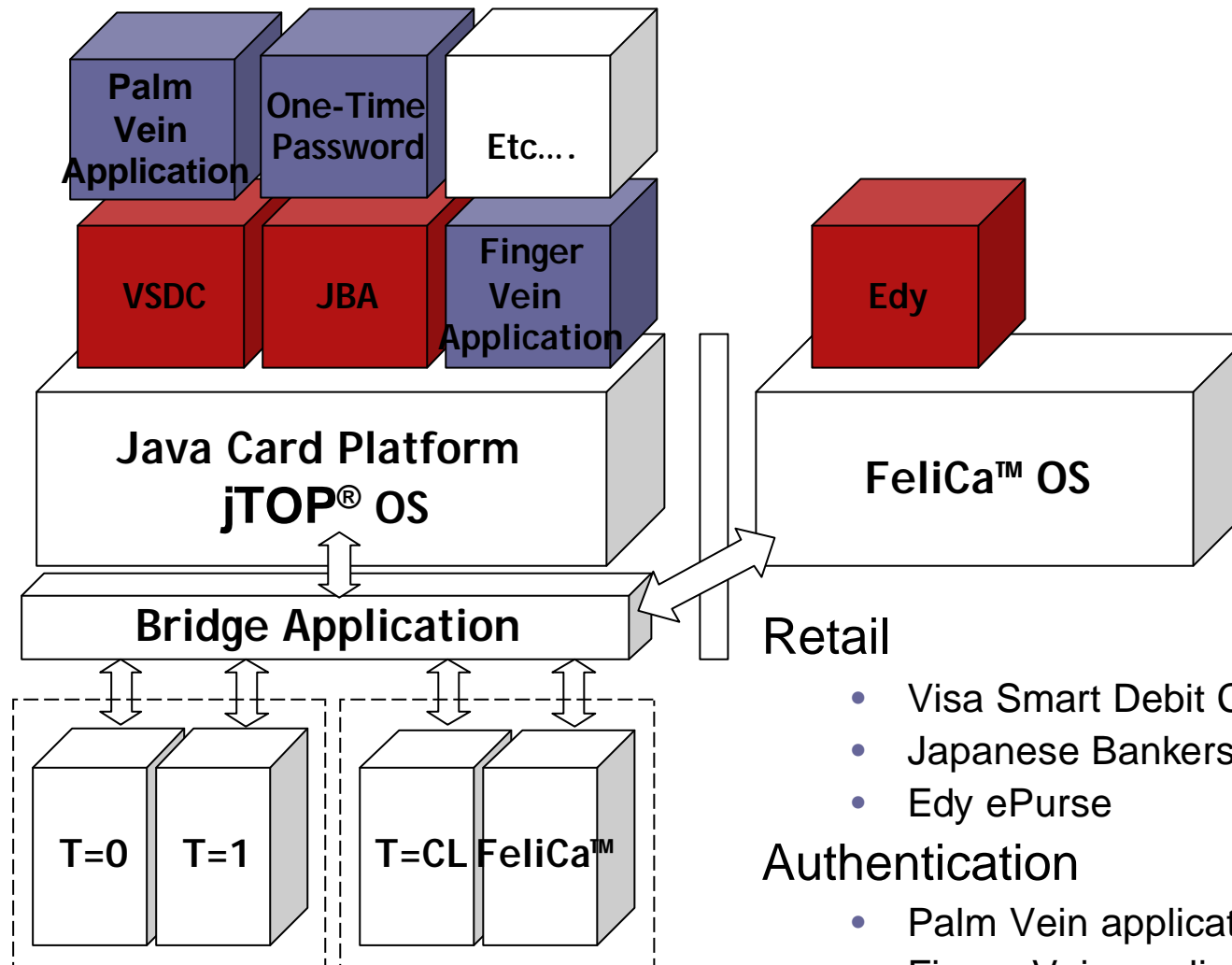


VISTA Architecture





VISTA for Multi-Retail Applications



Retail

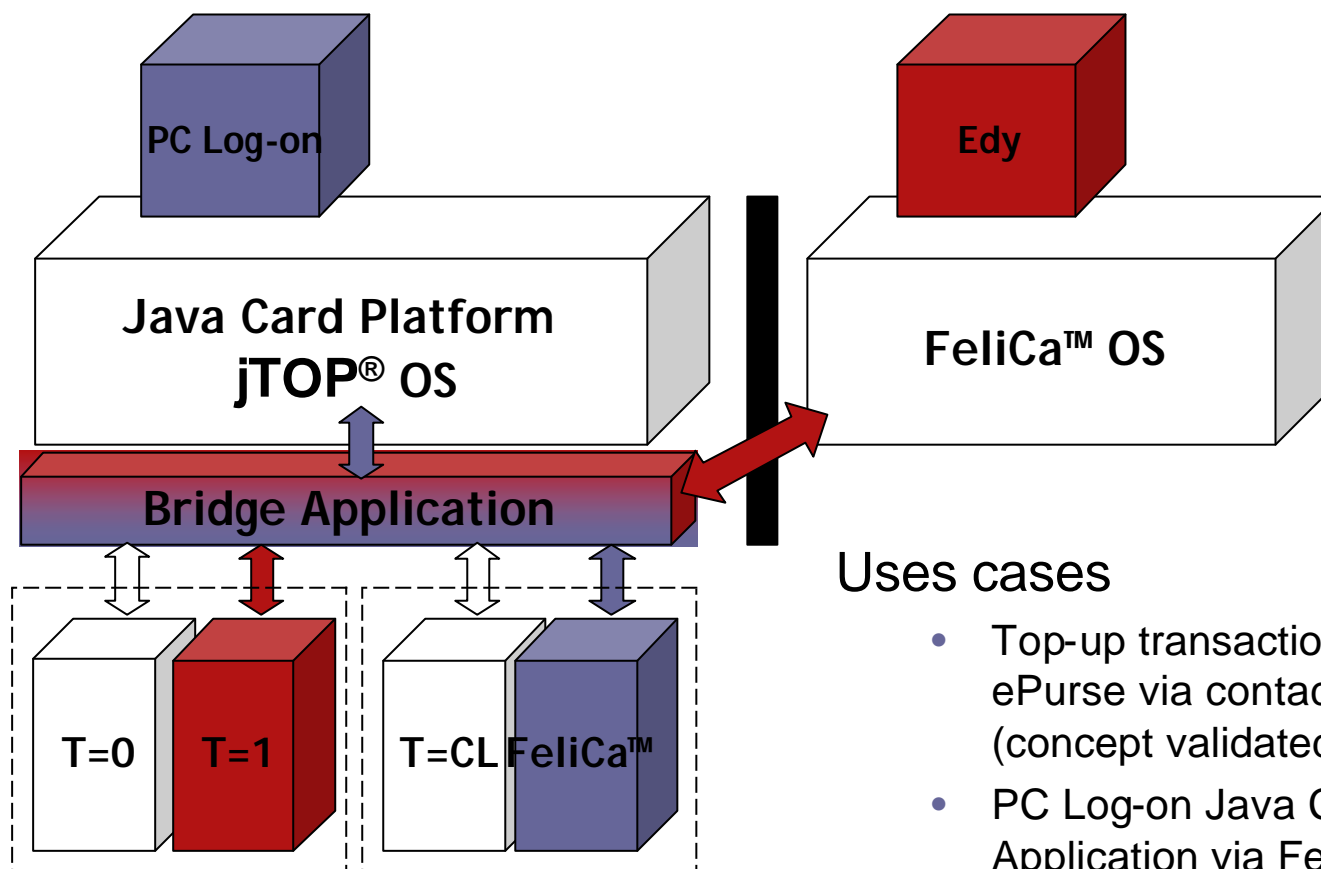
- Visa Smart Debit Credit
- Japanese Bankers Association
- Edy ePurse

Authentication

- Palm Vein application
- Finger Vein application
- One-Time Password



VISTA supports Cross-Accesses



Uses cases

- Top-up transaction for Edy ePurse via contact-based reader (concept validated by bitWallet)
- PC Log-on Java Card[™] Application via FeliCa[™] reader



VISTA Customers

- ? VISTA chip approved by Visa in Q3 2004 (Java Card)
 - Two enhanced VISTA products introduced afterwards
 - CC EAL4 undergoing for the enhanced product
- ? High-end solution for multi-application banking
 - Bank of Tokyo Mitsubishi UFJ (BTMU)
 - Japan Post Bank
- ? Almost 10M chips shipped (in total) to date
 - Period from 2004 through 2007
- ? Use case for BTMU
 - EMV-based transactions (Visa VSDC) for purchasing goods at retailers (based on PIN code)
 - JBA-based transactions (Japanese Bankers Association) for cash withdrawal at ATMs (Palm Vein Authentication available)
 - Edy ePurse for small amount contactless transactions



Thank you !

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www.javacardforum.org