

CIPURSE Mobile Guideline V1.0

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CIPURSE™ Key Benefits for Mobile Applications

- Especially designed for contactless card and NFC-based fare collection systems
- Vendor-independent (all card suppliers can support CIPURSE)
- Technology providers free to add functionality outside the common core (multi-application support)
- All CIPURSE products undergo rigorous certification testing by third-party organization (Keolabs)
- Incorporates advanced security (AES)
- Reader independent: Any compliant ISO14443 reader can be used

CIPURSE is based on Standards

CIPURSE is build upon existing, proven and open standards

- ISO 24014: Interoperable fare management system
- ISO 7816: Smartcards
- ISO 14443: Contactless Communication
- AES 128: FIPS encryption standard

CIPURSE V2 Tickets and Form Factors

One specification - CIPURSE V2 supports all kind of industrial Form Factors of contactless cards and NFC based products as well as ticket types in the same AFC System



CIPURSE V2 Facilitates a Multi-Application Universe



CIPURSE Mobile at a Glance

Java Card 2.1 or higher and GP 2.2 based CIPURSE Applet

Over-the-Air & Over-the-Internet Support

- Application download
- In field application activation and de-activation
- Lifecycle management

Designed for multi-application support

- CIPURSE, Payment, Access, Couponing, Loyalty and others on one Secure Element

Form Factor independent

- Support for all kinds of form factors now and in the future

CIPURSE™ Mobile

Fast and convenient solution to introduce NFC Ticketing

- No CIPURSE Transport system upgrade needed
- No new specification needed (CIPURSE Mobile based on CIPURSE V2)
- Implementation to existing and new NFC Phones via OTA/OTI services
- No need for withdrawal of CIPURSE products from the field to introduce new services

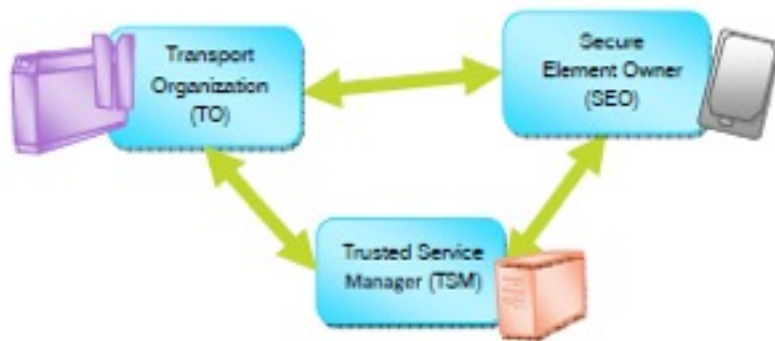
Made to meet customer requests

- CIPURSE Mobile & CIPURSE V2 support all kind of ticket types and form factors to meet various market and customer requirements

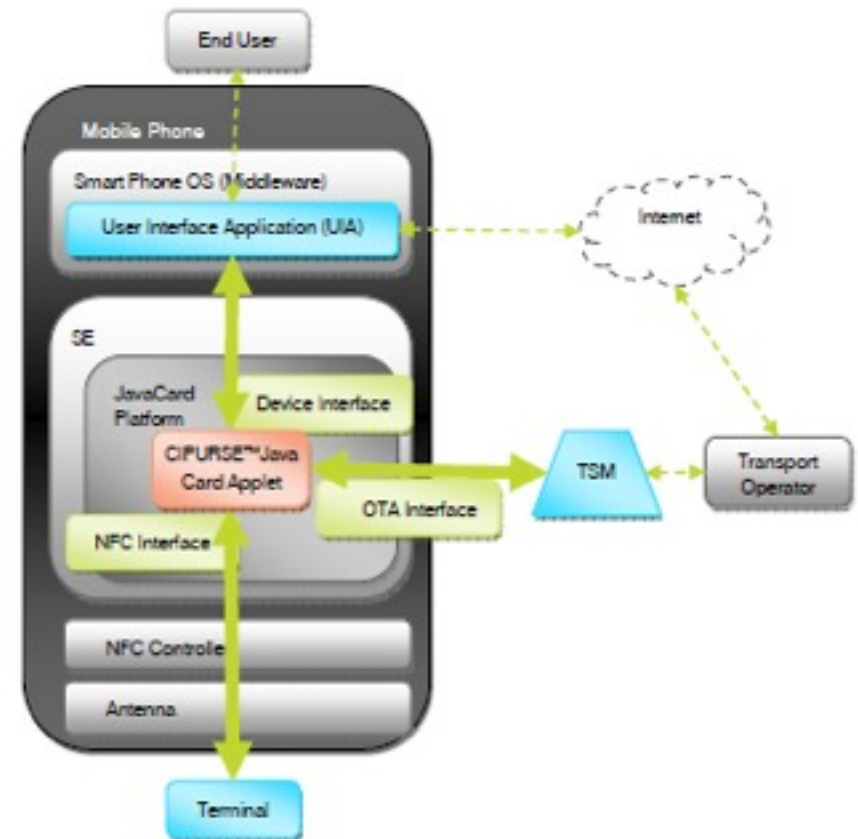
Added Value Services Support to be part of CIPURSE Mobile

- CIPURSE Mobile for Couponing
- CIPURSE Mobile for Access Control
- CIPURSE Mobile for Loyalty

CIPURSE™ Mobile - Ecosystem and Devices



Existing Business Model



Secure Element Independent

CIPURSE Ticketing & VAS Solution

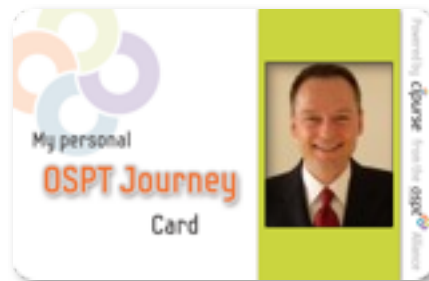
**Live demo
during
MWC 2013**



CIPURSE Mobile is LIVE!



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Future of Ticketing

We are ready for the Market!



CIPURSE Mobile Guidelines
ready for download at
www.osptalliance.org



CIPURSE Market Outlook

“We expect to see CIPURSE deployments start in Europe and then follow in other regions as more cities see the benefit in smarter transportation systems. A broader and more flexible product range will help it to develop like MIFARE.”

-John Devlin, Group Director, ABI Research 2012



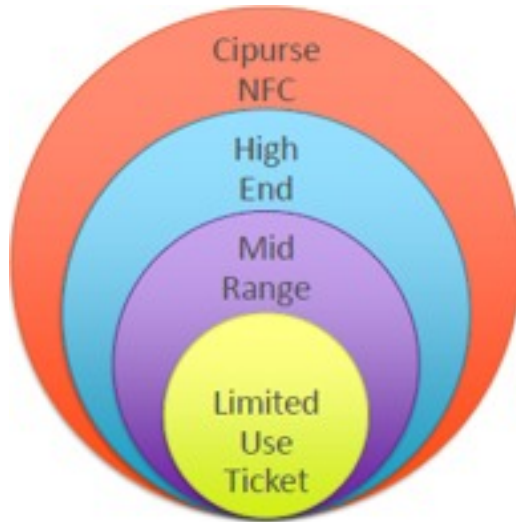
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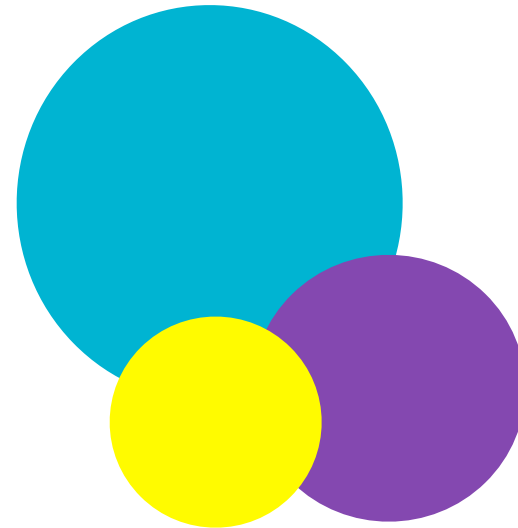
Thank you

For more information about CIPURSE™, please visit:
www.osptalliance.org

CIPURSE V2 vs. Other Solutions



- CIPURSE products are scalable
- All specification levels use same memory structure, command set, crypto algorithm and protocol
- Only CIPURSE guarantees coexistence of different specification levels (ticket types) running in one transportation ecosystem without changes
- CIPURSE allows switching between specification levels (ticket types) and form factors in the transportation ecosystem



- Solutions are NOT scalable
- Product levels have different memory structures
- Different communication standards are used (e.g ISO 14443-3 and ISO 14443-4)
- Security algorithms and command sets are different in throughout the product levels
- It is not possible to use different product levels in the same transportation ecosystem without Software and/or Hardware changes. Expensive system changes are needed