

# Crédit Agricole has undertaken one of the world biggest EMV issuing project to date



*1<sup>st</sup> worldwide reference for data preparation*

*Crédit Agricole has undertaken one of the world biggest multi-application EMV issuing projects to date by adopting the data preparation software CardInk.. Cedicam (Credit Agricole subset dedicated to automated Payment Systems) is one of the largest bank in Europe With CardInk solution, Cedicam is also one of the first to implement Common Personalization (standard endorsed by EMVCo) and Dynamic Data Authentication (DDA).*

*Bull has played a key role in upgrading the card product platform to the EMV, and has been able to meet the challenges by offering the highest level of flexibility under security and costs constraints.*

*Bull is here the Prime Contractor, provides technical support and has gained professional skills in EMV migration.*

Cedicam issues multi-application smart cards which carry the French application B0' and Moneo E-purse as well as both a domestic and an international EMV application.

Cedicam's main site and the production is processed at another site.

The communication is done via the configuration of separate CardInk installations which support one-time set up and remote management.

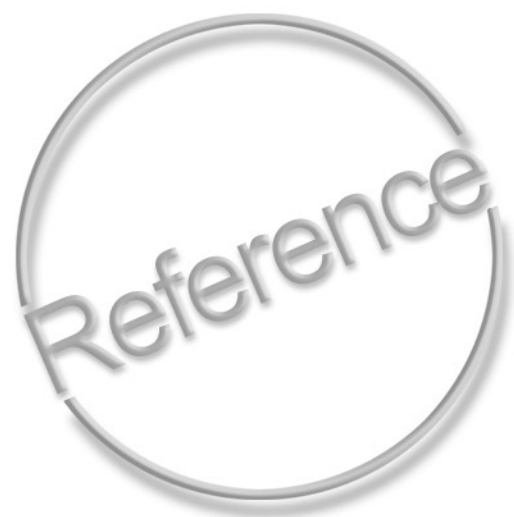
## **Solution overview**

The production involves a number of entities. CardInk performs the data preparation and the magnetic stripe data is managed by an existing back-office solution. Datacard DPP is used to manage the entire card production process. The data produced by CardInk is here written onto smart cards via a series of high volume DC 9000 personalization systems.

The production requirement at Cedicam is 10 000 cards an hour. Such a performance is ensured by putting several CardInk servers operating in parallel.

CardInk is also a generic solution and has been designed to be implemented in different customer cases. CardInk output EMV data in P3 and Common personalization formats. The files can be used on a variety of personalization systems including DataCard, CIM and Orga.

CardInk is developed as a two part client/server system. The cryptographic keys and overall security are managed in



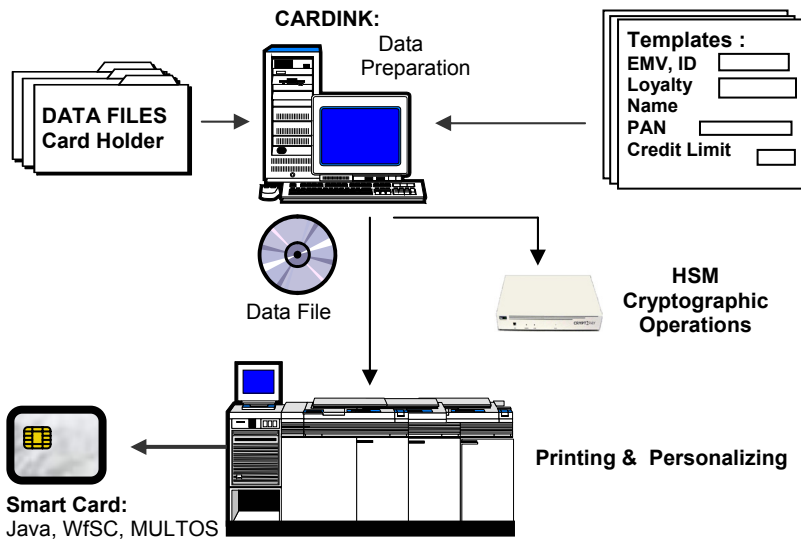
Smooth the EMV migration path and meet future business requirements



**CRYPTOMATHIC**



# CardInk Operating Architecture



## About CEDICAM

Cedicam is a Credit Agricole's subsidiary dedicated to payment flows and systems.

With over 500 employees, Cedicam has always been a pioneer in payment systems and was also an early adopter of the smart card technology in the late 80's.

Cedicam now deals with over 12 billion chip-based cards with outstanding low fraud rates.

It is also a major European EMV issuer and the first French bank today.

Customer's benefits	Technical Features
<p><b>Issuer flexibility</b></p> <ul style="list-style-type: none"> <li>. Suit almost any card strategy</li> <li>. Integrate with existing environments</li> <li>. No limitation of the number of issuers supported</li> <li>. Trustful Hardware Security Module (CRYPT2Pay by Bull)</li> </ul> <p><b>Bureau flexibility</b></p> <ul style="list-style-type: none"> <li>. Work with the major preparation system (Data card, Orga, CIM)</li> <li>. No limitation of the number of cards</li> </ul> <p><b>Key Management</b></p> <ul style="list-style-type: none"> <li>. CRYPT2Pay key storage</li> <li>. 3 DES and RSA key generation</li> <li>. End to end certificate management</li> </ul>	<p><b>Applications supported</b></p> <ul style="list-style-type: none"> <li>. Visa VSDV SDA and DDA</li> <li>. Mastercard Mchip Lite select and clip</li> <li>. BMS Moneo E-purse</li> </ul> <p><b>Platforms supported</b></p> <ul style="list-style-type: none"> <li>. EMV 96 &amp; 2000</li> <li>. Global platform</li> <li>. Multos</li> </ul> <p><b>Operating environments</b></p> <ul style="list-style-type: none"> <li>. Microsoft Windows NT4 / 2000 / XP</li> </ul> <p><b>Operating database</b></p> <ul style="list-style-type: none"> <li>. Oracle V8 &amp; V9</li> <li>. Microsoft SQL Server 7 and 2000</li> </ul>

*With more than 20 years in financial security, Bull has gained a professional experience in securing banking networks. Our team can provide customers with integration and architecture consulting, worldwide maintenance and support at competitive fees.*

*Thanks to a large network of technological partners, Bull can offer comprehensive payment systems from POS and ATMs to Front and Back Office Servers. Some of our key partners are ACI Worldwide, ATOS Worldline CRYPTOMATHIC, eFunds, Jware Technologies, Magellan, S2 Systems, S2M, Steria and many others.*

*Many banks and card centers worldwide already rely on our technology and experience: Crédit Agricole, Société Générale, BIAT, Georgian Cards, Farmers Bank ...*

*Bull is recognized as EMV Vendor by Visa and MasterCard International. Our HSM is certified by American Express Global Network Services (AMEX GNS™).*

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