

Open Smart Card Infrastructure for Europe

V2



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EUROPEAN COMMISSION

EU Blueprint on Mobile Payments

Accelerating the Deployment of Mobile Payments throughout the Union

Working Document

Draft V0.1



Information Society

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EU Blueprint for Mobile Payments¹

1 INTRODUCTION

The widespread access to payment services on mobile phones and mobile communications devices is a **pre-condition** for the development of a successful marketplace for advance mobile services in the European Union. In addition, mobile payments are likely to become an important segment of the retail payment market.

Despite the high level of expectations which prevailed in 2000 and 2001, there is no mobile payment platform that has yet gained significant market acceptance. Existing solutions are either only available in specific geographical areas or among a given set of market ~~actors~~players, or limited in the range of functionality they offer (e.g. micro-payments only, or pre-paid only). Current solutions are generally costly due to ~~a~~the absence of economies of scale. There is therefore no truly competitive offering on a pan-European basis, including a sufficient ~~set~~range of functionality.

In this context, the Blueprint on Mobile Payments aims at developing a broadly-supported approach that could give a new momentum to Industry-led initiatives and accelerate the **large scale deployment** of “**sustainable**” **mobile payment services**.

For the purpose of this Blueprint, a distinction will be made between two fundamentally different payment situations:

- Payment for on-line purchases (pre- or post-paid) where the buyer is not physically present at the point of sale.
- Payment for purchases where the buyer is physically present at the purchase location², whether it is an automated accepting device such as a vending machine, or at a traditional (attended) point-of-sale outlet.

Whenever required, these two situations will be addressed separately in this Blueprint document.

From the viewpoint of economic impact on mobile services, the first situation requires a higher degree of attention from public authorities. The second situation may be ~~assimilated to~~regarded as an innovative substitute for traditional card payment (e.g. electronic purses).

¹ Comments between brackets [...] in the text are specific invitations for comments/reactions.

² This is generally referred to as “proximity payments”.

2 POLICY BACKGROUND AND E-EUROPE 2005

The Barcelona European Council in spring 2002 called upon "the Commission and the Member States to foster the use of open platforms to provide freedom of choice to citizens for access to applications and services of the Information Society, notably through digital television, 3G mobile and other platforms that technological convergence may provide in the future." It also invited the Commission to present "a comprehensive analysis of remaining barriers to: the achievement of widespread access to new services and applications of the information society through **open platforms** in digital television and **3G mobile communications**, the **full roll-out of 3G mobile communications**, the development of e-commerce and e-government and the role that national electronic identification and authentication systems could play in this context."

As a result, the European Council in Sevilla in June 2002 has endorsed the Action Plan **eEurope 2005** which sets the scene for a co-ordinated European policy approach on information society issues. This Action Plan contains two objectives which are particularly relevant for the Blueprint on Mobile Payments:

1. **Interoperability.** By end 2003, the private sector should, supported by the Commission and Member States, have developed interoperable e-business solutions for transactions, security, signatures, procurement and payments. This will facilitate services enabling seamless, secure and easy cross-border electronic business and mobile commerce.
2. **Reduce barriers to broadband deployment (including 3G Communications).** Member States should ease access to rights-of-way, poles and conduits to facilitate investment, for instance through the removal of legislative barriers. The Commission will support this by encouraging and organising exchange of local and regional experience and private/public partnerships.

It is therefore proposed that the EU Blueprint on Mobile Payments formally supports the eEurope 2005 objectives stated above.

3 CURRENT ISSUES AND BARRIERS

3.1 Security and risk management

There is no effective mobile payment service without adequate security and sound risk management.

The level of security of any system is equal to the level of security of its weakest component. It is therefore important to ensure that mobile payment services do meet minimum criteria to safeguard the security and privacy of individual users (consumers or business users) as well as to minimise systemic risks.

The above issue is particularly sensitive in cases where mobile devices are just an additional access channel for traditional payment products (e.g. credit or debit cards). A lower level of security regarding the mobile access channel would lower the final security level of the overall payment system.

As for mobile payment solutions which are limited to the mobile transaction environment (e.g. most of the operator-billing based solutions), there is a general concern that these solutions do not become targets for specific fraud if they would-do not meet similar levels of security as-to those imposed on the traditional banking system.

In addition to risks in retail payment activities (providing payment services to customers), there are also risks in the wholesale activities (clearing and settlement payments between operators such as mobile telecommunications operators and/or financial institutions) which needs to be addressed on a pan-European basis.

At this date, and taking the above into account, a vast majority of market actors players recognise that a certain level of consensus should be reached on aspects related to required levels of security, the possible need for independent certification/evaluation. In the end, some degree of co-operation between stakeholders will be required to ensure proper risk management, namely assessing risks, controlling risks and monitoring risks on an ongoing basis.

General and/or Industry-specific regulators should be involved in this debate.

[In the case of “proximity payments”, as described in the Introduction section, the risk management model should be similar to traditional card payments in a majority of implementations since the on-line aspects is only a substitute to-for the local card-to-POS communication]

[Comments/Reactions/Propositions from Market Actors/Practitioners are expected under this section]

3.2 Technical infrastructure

Proper economies of scale and ease of use can—not be achieved without a minimum level of interoperability and standardisation of the technical infrastructure.

In spite of the differences between the various mobile payment schemes, most of them are similarly structured and rely on a fairly comparable technical infrastructure. However, current technical infrastructures lack ~~of~~ the required degree of standardisation and interoperability ~~on~~ at various levels:

- Components (e.g. handset configurations³)

For example: the presence (or absence) of hardware security elements within handset devices, the pre-loading of software applications on handsets, or aspects linked to the sharing of devices between several payment services providers. In addition, ~~the~~ debate is continuing on the feasibility of dual-chip handsets or dual-slot handsets to handle payment smart cards ~~is not yet closed~~.

- Software platforms⁴
- Back-office services (e.g. clearing and settlement)
- End-to-end Quality of Service (QoS)

The consensus view is that harmonisation of basic infrastructure components is prevented by a lack of proper co-operation on two levels:

- Between ~~actors~~ players located in different regional markets (i.e. in different Member States)
- Between key sectors involved (i.e. mainly the mobile telecommunications sector and the financial payment services sector).

[Comments/Reactions/Propositions from Market Actors/Practitioners are expected under this section]

³ In the case of “proximity payments”, the presence of a “Bluetooth”— or assimilated – standardised interface could/should also ~~be~~ considered.

⁴ The existence of “off-the-shelf” software offerings would improve the economics of offering mobile payments and pave the way for technical and business interoperability.

3.3 Regulation and oversight of payment services provision

Unnecessary burdensome regulatory and supervision requirements could endanger the economics of offering mobile payment services.

This issue is mainly put forward by mobile network operators ~~which~~ who will have to comply with general financial sector regulations (like anti-money laundering laws) whenever extending current billing services or offering full-fledge payment service. The recurrent question is which services require an EMI⁵ licence and which activities require a full banking licence.

Most concerns are reported on two levels:

- In some Member States, strict payment services regulation may ~~reveal~~ be seen as a deterrent for emerging mobile payment services providers (in particular mobile operators), especially when payment services may be assimilated to “deposit taking”.
- In the case of pre-paid value, there is a debate in several Member States on whether or not such pre-paid value system are to be considered ~~or not~~ as e-Money as per the EU Directive on E-Money Institutions. Many Mobile Operators seek a liberal and appropriate application of the E-Money Directive to micro-payment prepaid services, which reflects the low levels of risk attached to them and which will not hinder their development. It appears that some market players consider that the Directive is being implemented in several Member States in a way which is inconsistent with its spirit to “create legal certainty, encourage new entrants, encourage competition and contribute generally to the development of electronic commerce”.

[Comments/Reactions/Propositions from Market Actors/Practitioners are expected under this section]

⁵ Electronic Money Institution

3.4 Stimulation and protection of investments

Investors' confidence has to be reinforced to ensure the proper funding of the minimum required technical infrastructure.

Finally, investors may remain reluctant to commit large amounts of investments in the area of mobile payments as long as there is a lack of stability of technical standards and business models. In addition, there is no clear vision on how mobile payment solutions will evolve from the 2G environment to 2.5G, and finally to the 3G environment. Investors' lack of confidence is therefore, in its own right, an obstacle to the deployment of mobile payment services.

The overall economics of deploying mobile payment services certainly follows the Metcalfe's law on network effects⁶. This is due to the fact that users have a high preference for ubiquity. In this context, it is important to ensure that core services can reach critical mass in a reasonable time frame. In principle, ubiquity of service can be achieved by centralised solution(s) or by co-operative solution(s) which lead ultimately to interoperability. It is also known ~~by~~^{from} experience that the longer it takes to achieve interoperability, the higher the market concentration rate is likely to become.

[A possible approach to accelerate market development would be to ensure that a sufficient number of key stakeholders volunteer to agree on a set of minimum standards. This could be done via inter-sector working groups, via inter-sector standardisation co-operation and also possibly via cross-Industry arbitration mechanisms to resolve possible conflicts between technical standards. Such possible need for (and possibly conflicts of) core standard could be identified in the context of this Blueprint].

[There should also be an ongoing, structured, open and transparent dialogue on organisational and business model aspects].

[Industry should ensure that pricing strategies⁷ take initial investment costs into account in order to allow investors to benefit from an economically-sustainable return on their investments. This should however be done in full compliance with competition law. Industry should seek ~~for~~ ad hoc advice on this subject from appropriate competition authorities].

⁶ According to the network effect, the usefulness of payment systems increases with the number of users.

⁷ Pricing aspects include both prices for the end users ~~as well as~~^{and} transfer prices between stakeholders participating in the value chain.

3.5 Independence of Mobile Services Providers from Mobile Networks

Mobile service and content providers rely on mobile networks for the delivery of their products and services. In most cases, the interdependency between service and network providers fosters new forms of partnerships which are mutually beneficial. In some cases however, the partnership reduces the number of payment options available to service providers, and hence to consumers.

The choice of mobile payment service provider should not be fundamentally restricted due to the existence of specific marketing and/or operations agreements between mobile service/content providers and a given sub-set of mobile operators.

To some extent, the same payment function should, in appropriate cases, be able to operate across a variety of mobile networks in a –quasi – transparent fashion.

It is also important that consumers can choose their preferred payment mechanisms, preferably at the time of the transaction, and independently from the specific mobile network of which they are customers, or the specific network they are “roaming in” at a given time.

[Comments/Reactions/Propositions from Market Actors/Practitioners are expected under this section]

4 THE WAY FORWARD (PROPOSED ACTION PLAN)

[This section is totally exploratory at this stage of development of the Blueprint. The current content below is only given as an illustration of the type of conclusions which could be adopted whenever there is sufficient Industry support.]

The section is completely open to comments/suggestions/modifications/corrections/additions,...

Comments/Reactions/Propositions from Market Actors/Practitioners are expected under this section.

Input will be analysed, quantified and reported to the whole Constituency in due time, normally at a point in time in Sept. 2002]

The parties adhering to this Blueprint on Mobile Payments recognise that:

- ❑ mobile payment is an essential enabler of mobile commerce;
- ❑ the deployment of economically-viable mobile payment solutions seems to be significantly slower than initially anticipated;
- ❑ mobile payment solutions should be available to cover a range of transactions, from small-amount payment (e.g. micro-payment) to at least medium-size amount (e.g. EUR 500) with - or without - need for credit risk monitoring functions;
- ❑ users (consumers or business users) should be entitled to have a reasonable choice of payment options available, wherever they are conducting mobile business in Europe;
- ❑ some mobile payment products will require a degree of co-operation between leading ~~actors~~ players of at least three sectors: the mobile telecommunications operators, the mobile service/content providers and financial institutions /payment services providers.

The parties adhering to this Blueprint on Mobile Payments commit to:

- (detail on critical functions where co-operation between a large number of Industry players in different sectors is required).
- Identify the minimum set of security requirements that they agree to apply to ...
- Establish a (temporary) joint Standards Board (SB) by (date) to review the minimum set of required standards on which the signatories of the Blueprint agree to co-operate. The SB should identify conflicts and overlap between existing standards and resolve them, identify gaps in required standards and propose how to resolve them. The SB should involve the existing standards bodies or de-facto standards which are relevant for the domain.
- Exchange information [with public authorities](#) on issues of a regulatory nature and attempt to adopt a common position on how to address them ~~with public authorities~~.
- Examine possibilities for interoperability between existing schemes (of which the signatories are [a part-of](#)) and issue a public report on their key findings.
- Provide public information on [a possible business model](#) that could be adopted to accelerate the economic feasibility of

Proposed detailed Action Plan (will probably be included in an appendix)

This section will include the detail of proposed actions and a final time table.

[European Commission to monitor implementation ? or Industry itself ?]

DRAFT

5 CONTRIBUTIONS AND SUPPORT

(List of Contributions to this Blueprint and list of companies and organisations endorsing the recommendations.)

This Blueprint document is a **consensus view on a co-operation framework**, signed/endorsed by a **critical mass of market actors-players** and possibly supported by appropriate public authorities.

This is a **voluntary commitment** to undertake the **recommended actions**. While there is no legal obligation to respect the agreements that emerge, the endorsement of the Blueprint represents a **public commitment** to respect certain principles and to work towards specific common goals and consensus in specific areas described in the section 4 (The Way Forward).

The Blueprint therefore represents a combination of commitments and shared views on most efficient roadmaps that together will accelerate coherent developments which no organisation, or group of organisation acting alone could achieve.