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**Response Paper**  
**mHITS Limited**  
**[www.mhits.com.au](http://www.mhits.com.au)**

Response to the Strategic Review of Innovation in the Payments System: Issues for Consultation:  
June 2011



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## About the mHITs SMS payment service

mHITs Limited (pronounced Em-HITS) is a multi-award winning developer and operator of mobile payment platforms. It operates the Australian based SMS mobile payment service under the mHITs brand that allows users to send and receive payments via SMS. The mHITs service is a micropayment service is designed for small value transactions that would normally be performed via coin. Typical transaction sizes are in the order of \$5 to \$10.

The service operates via a user (individual) and merchant (business) account structures. Transaction fees apply to certain classes of transactions although person-to-person payments between mHITs users are free.

The mHITs service is a debit system and access is restricted to Australian mobile phone users only. Users must load their account before they can effect a payment. Users can load their mHITs account via BPAY, Electronic Banking, PayPal or Credit Card. Accounts cannot be overdrawn and both users and merchants do not receive interest on their stored mHITs balance.

More information on the mHITs service is available at [www.mhits.com.au](http://www.mhits.com.au).

### vendor work in international markets

mHITs Limited is also working in overseas markets in the design, development and operation of mobile payment and applications. In particular, mHITs focus on solutions in the developing world for the so-called “unbanked” or people who do not have access to traditional banking products or services.

Globally and across all mobile platforms and deployments, mHITs technology has processed in excess of 10 million transactions to date.

Examples of products, services, deployments and case studies in these markets can be found at the mHITs corporate website at [www.mhitslimited.com](http://www.mhitslimited.com).



## About this submission

This submission seeks to respond to selected discussion points that are directly relevant to the interests of mHITs or where it is believed that a response can best contribute to the discussion points. While other discussion points are also relevant to mHITs operations in Australia, it is felt that our responses should focus on those areas in which we have the most knowledge and expertise. Specifically, this submission addresses discussion points under *Section 6: Innovation Gaps in the Australian Payments System* (discussion points 30, 31 and 32) and *Section 6.5: Mobile Payments* (discussion points 42, 43, 44 and 45).

## Innovation Gaps in the Australian Payments System

### Discussion Point 30: Demand for Innovation

*How widespread is the demand for the innovation in question and how significant would the impacts be?*

Is there a demand for payment system innovation in Australia? Possibly not.

Incumbent payment providers don't always need to innovate – they control the market anyway.

Perhaps the only way of “forcing” innovation is when their market share is threatened.

In Australia as is the case with many western markets, there is an obsession with the pursuit and adoption of newer and newer technologies for technologies sake alone without full consideration of or exploitation of currently available alternative and often un-sophisticated, legacy, technologies that can solve the same problem usually at a much lower cost. There is also a disconnection between this and the real need that the technology services.

This obsession has been at the expense of proper consideration of what factors drives uptake of any payment ecosystem – in particular mobile payments.

A second factor in driving innovation is need. In any market, a successful technological solution achieves take-up because of one more problems it solves. In Australia, as is again often the case in developed markets, it could be argued that, and notwithstanding issues raised in this report, that there is a strong case to state that infact there is no real problem in the Australian payments space that requires immediate solving.

This is the fundamental question that innovation must address: “what problem does the innovation itself actually solve?”

### Discussion Point 31: Impediments

*Are there any specific impediments to that innovation occurring, e.g. barriers to entry, co-ordination problems, technological constraints?*

The Australian payments sector is dominated by four major incumbent banks which arguably have no natural vested interest in payment innovation apart from when it comes to protecting their market share or costs.

It could be argued that the current payments landscape in Australia works well and really, compared with other markets, is in comparatively good shape.



## Innovation must have clear benefits

Unless a clear benefit for an improvement or innovation can be demonstrated, and unless there is a fundamental benefit to the Australian payment system incumbent stakeholders, it is difficult to see how innovation will naturally blossom on its own.

In this climate, it is difficult for new innovative players to enter the market and achieve critical mass without a killer application or service that the incumbents do not or cannot provide.

Short of a killer payment application, and left alone, the payments market will not “evolve” or innovate on its own unless somehow forced. For innovation to occur, there must be a clear problem to solve.

The issue is more of whether there is enough agreement that there is a problem within the current system and then is there enough motivation to solve it? Perhaps more importantly, is there enough of an economic motivation for innovation?

The impediments or barriers to entry may lie within the culture of apathy within the market in general. Unless there is a disruptive player or threat, this situation is unlikely to change on its own.

## Lack of Collaboration

There may be a case for collaboration within different sectors of the Australian payments space. The most obvious would be between the mobile telecommunications and banking sectors. Presently this does collaboration does not occur in Australia, which has contributed to payment innovation stagnation across both of these sectors.

In many markets in the world, there is a culture of collaboration between mobile carriers, financial institutions and 3rd party value added providers. There are many 3rd party providers in Australia but the absence of collaboration has meant that there has been no platform or operating model on which new payment innovation can be built.

Without a platform for innovation, new models and ideas struggle to develop. New payment models represent a high degree of risk. While it is almost impossible to predict what types of new innovation might emerge from a collaborative approach, it is clear that at least something will evolve.

An issue hindering collaboration is that of the conflict over the notion of “ownership of the customer”. This issue is not unique to the payments sector but it is relevant. In Australia, there is general culture of needing to “own the customer”. Commercially this is understandable but this obsession has been at the expense of providing new, innovative service to customers.

Two common arguments to justify lack of collaboration and innovation are security and standards. Short of examining these in great detail, these can be managed if the need or the demand for a service can be demonstrated. For example, credit cards are an inherently unsecure form of payment that were never designed for online payments. However, the industry has managed to “innovate” to develop various methods of securitisation to minimise online fraud, a clear demonstration of economic need driving innovation.



## Discussion Point 32: Public Intervention

*Is there a case for public intervention?*

Public intervention would be the last resort and could be seen as a failure of the market to innovate on its own. Ideally, in a perfect world, the market should innovate on its own.

However, public intervention could potentially drive innovation by mandating new capability that could provide a more attractive environment for innovation. This might include capability such as:

- real time funds switching/settlement capability between payment institutions
- standardised transaction description information to accompany transactions
- easier access by (smaller) 3rd parties for connectivity to or participation in transaction switching within the Australian payments system
- incentivising collaboration between sector stakeholders
- incentivising or legislating for the introduction of new payment technologies and models for particular transaction corridors such as public transport (e.g. contactless card) and parking (e.g. mobile payment)
- setting goals or targets for introduction of transaction methods (e.g. must perform x % of transactions via a mobile device)



## Mobile Payments

### Discussion Point 42: Forms of payment

*What form are mobile payments likely to take in Australia over the next five to ten years – SMS-based, mobile internet, contactless or some other form?*

The form of a mobile payment service is not as important as the factors determining the adoption of a mobile payment service by consumers.

#### Definitions

The definition of “mobile payments” is very broad and confused. A downloadable Smartphone banking application is often classified as a “mobile payment” when strictly speaking, this type of transaction is an extension of existing on-line banking services – it is an online transaction performed on a mobile device. The payment services that these banking applications provide offer no real payment innovation or additional capability over the existing online banking experience – they usually offer less. Within this context, it is therefore difficult to define what constitutes “mobile payments” and creates confusion when educating the market and consumers when a new mobile payment system or technology is introduced.

Strictly speaking therefore, the term “mobile payments” should be separated from “mobile banking”. One possible approach would be to define mobile payments as those transactions that can only be performed via a mobile phone and no other device. Is Internet banking via a tablet classified as a mobile payment? The definition issue is also a global mobile industry problem which is probably beyond the scope of this report.

Certainly, it is the experience of mHITs in Australia, that when consumers are first exposed to the mHITs payment service, they assume that when an mHITs transaction occurs, funds are automatically debited from a bank account. While this is not in fact how the mHITs platform functions, it highlights the thinking and expectation in the market in regard to mobile payments.

This definition issue is not unique to Australia but it does hinder innovation. It is difficult for new innovative payment models to differentiate themselves in the market from existing payment services such as mobile banking.

#### Banked versus unbanked

As a developed country, and notwithstanding the issues and discussion points raised in this paper, most Australians have comparatively good access to banking and financial services – the so called “banked”. In contrast, developing countries and emerging markets have populations in which the



majority do not have this same level of access to financial services and nor are they likely to in the foreseeable future – the so called “unbanked”.

Mobile payment technology is globally acknowledged as a solution to enable financial inclusion for the unbanked. However, mobile payment solutions for banked versus unbanked markets are vastly different in architecture, technology and operation.

There is a strong case over the suitability of network payment models using simple ubiquitous technologies such as SMS or USSD for mobile based micro-payments. Implemented correctly, SMS or USSD are more than adequate for many micro-payment applications. However, due to Australia’s obsession with technology and in particular smart-phone technology, these technologies are generally only adopted in developing markets.

## NFC

NFC card based solutions on their own do very little to advance the cause of innovation in mobile payments. Their application is also restricted to Point of Sale payments only.

NFC solutions linked to or embedded within a mobile handset and/or indirectly connect via a networked payment mechanism have the potential to provide significant benefits to consumers. However, the lack of collaboration between stakeholders in Australia would suggest that these payment models are not likely to emerge. This is coupled with over 12 years of inconclusive integrated mobile/NFC trials in Australia which despite significant investment, did not provide a clear commercial incentive beyond pilot programs, although lack of standards are often cited as the reason.

## The Mobile Payment Ecosystem

For new mobile payment technology and methods to emerge, they are likely to be driven by factors around a payment ecosystem. The technology on its own is not likely to drive take-up.

Mobile payment systems succeed when they satisfy a clear need usually based on a very definable transaction corridor. Examples of this are: digital content and information, transport, parking and some forms of electronic vending. Furthermore, the type of transaction corridor may influence the type of mobile payment technology solution. For example, transport applications are best serviced by proximity-based solutions that have a fast transaction authentication. Applications such as vending and parking are best suited to network based payment technologies.

The proprietary nature of many of niche market solutions means that standards need to play an important role in enabling interoperability between systems.

There is also an argument for payment system ubiquity across different transaction mediums including Point Of Sale, online, and mobile. mHITs is the only Australian based full-service, integrated payment solution that covers these three channels.

## Paradigm Shift and Disruptive models

Unless there is a paradigm shift – some fundamental reason why a new payment method or application needs to be used by consumers, that it is difficult to imagine why the current status would not remain for the foreseeable future.

This paradigm shifting scenario would need to be outside the scope and control of the current major payment institutions. This could be driven by disruptive models or applications with as yet to be conceived ideas.

In the way the Internet and the new paradigm of online shopping led to the evolution of a new disruptive payment models such as PayPal, an equivalent paradigm would need to emerge to “force” a similar kind of innovation in payments, specifically mobile payments.

The ideal paradigm changing scenario might involve a carrier-led mobile payment application around person-to-person payments or a non-payment provider moving into the payment space to satisfy a business need. For example the way Google is moving into the payments space fully-fill the business needs of its existing ecosystem.

A possible catalyst for this type of payment innovation may be social media based platforms that have both established ecosystems and the size to drive widespread consumer take-up. It is conceivable that these ecosystems alone could lead to the emergence of new payment models as the traditional payment methods struggle to keep up with the functionality and capability that these new platforms require. As few of these are focused purely on the Australian market, it is difficult to imagine how this would be an Australian led initiative.

The regulatory framework in a given market could hinder this type of innovation by restricting the nature and type of payment services available, possibly to the detriment of the community.

This could also strengthen the case for payment system standardisation. It would be critical that any standard or regulations are internationally compatible and would not block these potential innovations from overseas operators.

## Discussion Point 43: Impediments

*Are there impediments to the development of mobile payments in Australia? If so, what type of payments are being impeded and how?*

Impediments to the development of mobile payment in Australia have been mentioned in responses to previous sections. Summary points are listed below:

- changing the prevailing mindset in the payments landscape of *“the system aint (really) broke so don't fix it”*
- articulating the clear need for mobile based payment services – transaction corridors in which they would be specifically used and what benefits they provide over the incumbent methods



- breaking into the existing payments ecosystem and the dominance of established payment mechanisms such as debit/credit card and other bank based products and services
- fostering collaboration or partnering by existing payments providers including across industry sectors e.g. mobile carriers and financial institutions
- lack of real-time funds switching ability across financial institutions
- lack of access to payments switching platforms by smaller operators
- absence of standardised description information with payments transactions within the existing payments system
- the complex and confusing regulatory framework in Australia means that it difficult to map a particular mobile payment model through the respective legislative compliances. The existence of a framework at all should in theory be a benefit as it provides boundaries within which a service can operate. However, the Australian mobile payments space is governed by four agencies: ASIC, APRA, RBA and AUSTRAC. No single entity can provide certainty in regard to a mobile payment model and there is no clear legislation to explicitly describe mobile payment models. However, this arrangement is arguably better than some developing markets which do not have legislative framework. In many developing markets, “approval” to operate a mobile payment service is done on a case-by-case basis, usually at the direct discretion of the Central Bank of the country.

## Discussion Point 44: Security Issues

*Are there security issues particular to mobile phones that may impede adoption of some types of mobile payments in the future? Are there likely to be issues with interoperability of mobile payment systems?*

### Security Context

Security is a potential issue for mobile payments but concerns are often over-exaggerated and taken out of context. Ultimately security is not an obstacle; it needs to be managed within the context of the type of mobile payment and the technology platform used. Security of a mobile payment transaction depends upon the payment model and should be viewed in context of its usage.

There is an argument for the use of anonymous mobile wallet payment systems to provide payment security separation from bank accounts and credit/debit account services. A mobile payment ecosystem that is separate from the payments system can potentially provide a form of fire walling from the main Australian payments system, thereby limiting the exposure. Transit based micropayment wallet systems in Australia already provide anonymity e.g. the ACT Government MyWay transit card. The anonymity of some micropayment solutions affords a level of security for its users – no personal details are stored therefore none can be compromised. The founders of BitCoin also propagate this argument.



## The Security-Usability tradeoff

The issues around security and mobile are often miss-understood in a mobile context. Security is always a trade off with usability. A system that is highly secure is usually very unusable. Conversely, highly usable systems can contain security flaws. Similarly, convenience usually means lower security – inconveniences usually mean higher security. A solution to security management for mobile payments is to set limits and thresholds within practical boundaries within the context of the use of the service. In summary, mobile payments = micropayments = low value transactions = lower risk.

An issue with mobile security for mobile banking applications is that they are based on a public IP connection model. Whenever a public IP based architecture is used as part of a payment model, it has the same security vulnerabilities of all IP based payment models (phishing, DOS attacks etc. including internet banking services. Against this backdrop, there is an argument to support proprietary architectures that are not IP based or that use alternative private communications networks such as SMS or USSD or for proximity based solutions, NFC.

## Smartphone vulnerability

The combination of Smartphone introduction and lack of innovation in the banking sector with regard to mobile payments has led to the approach in which the Internet banking experience is brought to the mobile via a downloadable app. Architecturally, this also means that mobile banking apps are also susceptible to the same security vulnerabilities as Internet banking platforms, although one could argue that the proprietary client nature of the app reduces this exposure.

Whenever Smartphone's are used as a platform to access mobile banking payment solutions which are connected to the main payments system in Australia, there is the ultimate potential for exposure of these systems to the same level of fraud currently from credit/debit card and Internet banking payments. The more sophisticated and capable Smartphone technology becomes, the more susceptible they become to the same security vulnerabilities that are experienced by PCs. Security of the Smartphone rather than security of the mobile payment system itself is likely to be an area that will require attention in the future.

## Discussion Point 45: Standards

*Are there adequate standards to support the development of mobile payments in Australia? If not, what standards are lacking, what types of mobile payments are affected, and who should be responsible for setting them?*



## The standards dilemma

There is a dilemma with the adoption standards for new innovative industries. By definition innovation changes standards. The issue of standards may be diametrically opposed to the interests of payment service operators who may also wish to protect their ecosystems and customer bases.

Standards can reduce the risk of new investment but do not necessarily mean that players will adopt the standards. For any successful mobile payment ecosystem, the value to the payment operator is in the proprietary nature of their ecosystem. Standardising connectivity between systems may de-value their platforms, IP and ecosystem.

## Standards and Innovation

Standards won't necessarily foster new mobile payment innovation. They may reduce the investment risk in development of new mobile payment platforms but the need and ecosystem are more important factors and are likely to override and benefits from standards.

Standards may reduce the risk of investment in so called "walled-garden" and other proprietary payment applications. However, standards won't necessarily make it easier for new players – just reduce the risks for existing players.

If a new payment mobile provider/channel/operator or model emerges, this is likely to be as a result of significant investment in proprietary systems and technologies. To protect new investment in mobile payment means it unlikely that a new player will "open" their service to competitors.

If standards are to be adopted, they should be based on those set by open, international payment standards forums. A non-government independent payment industry body should ideally set standards.