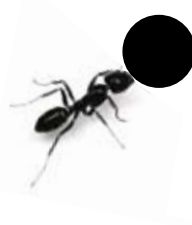


**Brief and guidance notes**

think  
big.



# Mobile phone security challenge

*Launch date*

**Monday 20 April 2009**

*Challenge closes*

**Friday 29 May 2009**

Four billion people worldwide have mobile phones – twice as many as have credit cards – and 80% of us carry information on our handsets that could be used by criminals to commit fraud. 16% of us already keep our bank details on our phones.

Our challenge to the UK's design and technology communities is to design a solution to improve mobile phone security – both now and in the near future when credit on our phones will replace the cash in our wallets.

We want designers and technologists to work together to design solutions across three areas:

- Making mobile phone handsets harder or less desirable to steal
- Making the data stored on mobile phones harder or less desirable to steal
- Making future m-commerce transactions secure and fraud proof.

The Mobile Phone Security Challenge is offering a total of £400,000 to four winning teams of designers and technology specialists to develop innovative, marketable solutions.

The Challenge is part of Design out Crime, an initiative from the Home Office Design & Technology Alliance Against Crime and the Design Council. The Mobile Phone Security Challenge is supported by the Technology Strategy Board and is part of a new procurement scheme called SBRI which helps public bodies to work with industry to generate ideas that result in short-term development contracts.

This Challenge is being co-funded by the Technology Strategy Board, the Design Council and the Home Office.

## Design Out Crime

### *Mobile phone security challenge*

#### **Brief and guidance notes**

##### **The problem**

According to the British Crime Survey, a mobile phone is stolen in half of all robberies. Mobile theft is a serious and costly problem in the UK and this can only increase with the proliferation of m-commerce.

The Challenge is to combat the next generation of phone theft that could see our cash and personal information at risk as never before. Millions of us will very soon be carrying our 'cash' on our mobiles - so-called m-commerce. The current value of virtual cash is estimated to be around £80 and this is typically distributed between a wallet, phone credit and Oyster card. New technology means this value may soon be concentrated in just one place.

As handsets become increasingly sophisticated, we're also carrying more personal and business information around with us – much of it unsecured. Experts in cybercrime believe that criminals will seize on this as a new opportunity – in much the same way that email and online banking spawned the 'phishing' phenomenon.

##### **The solution**

Existing PIN security on mobile devices is inconvenient and often ineffective and so new, innovative solutions are urgently needed. How can designers and technologists work together to develop new products, systems and services that address the problem of mobile theft? What will these new solutions look like?

Ideas might include a piece of software, a downloadable application, a new service offering – we are looking for the most innovative, marketable solutions that will help prevent thieves using a stolen phone for calls, accessing any stored data and m-commerce transactions, as well as reducing the phone's resale potential.

At the heart of any solution should be a clear indication of how it will be used by people in their day-to-day lives. Any solution should be easily adopted by the general public, and as such should be fundamentally based on both advances in technology and user centred design. We hope the competition will lead to practical ideas and innovations that can be taken up by mobile phone manufacturers and networks.

# Design Out Crime

## Mobile phone security challenge

### User scenarios

We've consulted leading experts in mobile phone use and theft to create three user scenarios that will help you develop a new solution that addresses one, or all of the three challenge areas:

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— *Making mobile phone handsets harder or less desirable to steal*

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— *Making the data stored on mobile phones harder or less desirable to steal*

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— *Making future m-commerce transactions secure and fraud proof.*

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#### User scenario 1:

##### The school bully – Jack, 13

Jack is from Ipswich where he lives with his parents. His mum, Stephanie, has decided to stop driving Jack to school because she's trying to do her bit for the environment. She also knows that Jack, now 13, is a sensible child who is starting to feel a bit more independent from his parents. It will do him good to get a bit of fresh air and exercise on the walk to and from school, which is only a mile away.

Stephanie's one proviso is that Jack has a mobile phone so she can call if she's worried about him. Although the school doesn't allow pupils to use mobiles while there, she's willing to bend the rules for his safety. Jack's promised he'll keep the phone switched off in his bag during school hours. Jack's phone is a hand-me-down from his father and Stephanie keeps it topped up with credit.

It's Friday afternoon and Jack has been walking back home from school with his friend Oliver who lives nearby. They reach the top of Oliver's road, where the friends say goodbye. Jack then decides to take the short-cut through the park. There he's spotted by a group of older kids and recognises one of them as the older brother of one of the boys in his class.

Jack knows he's in trouble as the older kids confront him. Jack's class mate has told them there's a phone inside his bag. The leader of the group says he has a knife and so Jack decides not to put up a fight. They push Jack about a bit and he ends up on the ground while one grabs his bag. The leader takes the phone and the other boys take the bag and run off with it, throwing its contents into hedges and flower beds across the park.

Jack's upset by the incident and gathers all his things that have been strewn over the park. The main thing that worries him is what to tell his mum. He's in a bit of a dilemma – he wouldn't want to tell his school since he's not supposed to have a phone on him and he knows his mum will kill

him, and might not allow him to walk back from school by himself any more. Jack spends the whole weekend worrying what to do and eventually decides to tell his mum he's lost it.

His mum, as Jack predicted, gets really cross at his carelessness. After bringing it up regularly over the next couple of days she decides to buy Jack a new phone. Ultimately, she's still worried for his safety when Jack's not with her or his dad. If he's going to get a new phone, then Jack wants to make sure it's one that's not too flashy – he still wants to blend in with the other kids. So, Jack does the research and finds a pay as you go deal at Phones 4U where he and his mum go the following weekend to get Jack a new phone.

The ringleader of the group of kids keeps Jack's phone. Having used up the remaining credit on it he now uses it mainly for the camera.

#### User scenario 2:

##### The cashless Olympics - Becki, 16

Sixteen year old Becki is really excited. She's going to the Olympic Park Velodrome to see one of the cycling events with her two friends Alisha and Danielle. They get the overground from Streatham, where Becki lives with her mum and step dad, to London Bridge where they hop on the tube to the Olympic Park. Twenty minutes later they get out at a very crowded Stratford tube station.

As she's coming out of the tube, Becki's phone gets signal and she hears it beep – she's got a text message. She gets the phone out of her bag and goes up the steps as she reads the text which is from her mum. Just as she's replying, someone snatches the phone out of Becki's hand.

She first wonders if someone has jostled her and she's accidentally dropped it. She quickly realises that the phone has been stolen, but in such a busy area she has no idea who took it. Becki is in shock - she didn't even see who it was and what they looked like.

She starts to panic. What should she do? She's really upset because she's lost the £20 of cash that was on the phone plus the £15 call credit. What about all her music? Though she can download some more tracks for free, and find the one she used for her ringtone, that's going to be a pain. Then there are all her friends' numbers and their birthdays. But to lose the money and the phone itself is really upsetting. She wishes she had been bothered to take the memory card out of her phone and back it up on her dad's computer.

## Design Out Crime

### *Mobile phone security challenge*

#### User scenarios

Alisha and Danielle comfort Becki and Danielle suggests they could go to the police, but they've no idea where the nearest station is. They decide the best thing is to call Becki's stepdad. Becki gets out another SIM card from her bag, but annoyingly it's for a T-Mobile phone and her stepdad's on Vodafone, so she'll be charged for the call. She puts the SIM in Alisha's phone and makes the call. She knows it's not the end of the world and at least she didn't get hurt, but that's not enough to stop her feeling shocked, angry and tearful. She decides to give the cycling a miss and go straight home to her family – it's totally ruined her day.

Meanwhile, the thief who has Becki's phone has used the £20 on it to buy a bottle of whisky and some cigarettes from a store nearby. The cash on Becki's phone works a bit like an Oyster card where you just swipe it over a reader to pay for your tube journey. This phone allows you to pay for something by just pushing a button on it at the till, so there's no need for pocket change. Becki was always a bit wary of something happening to it, like when her dad's credit card got cloned, but she didn't think it would ever get robbed from her hand.

Having drained the phone of cash, the next day the thief sells it to Dave, a contact, who gives him £20. With Becki's phone Dave has now completed his next batch of 25 that he, in turn, sells on to a contact of his. The phone will go through several hands until it ends up in a shipping crate on its way to China.

While she's waiting for a replacement phone from her insurance company, Becki borrows an old phone from her mum - it isn't great and she can't play her music on it. She feels a bit like the odd one out among her friends. She can't wait to get her new phone.

#### **User scenario 3:**

##### **Tablesurfing - Aaron, 22**

Aaron is out with his friend Kieran in the centre of Manchester on a Friday night. They're both 22 and like to meet up for a few drinks after work. It's a summer's evening so they're sitting at a table outside enjoying their pints.

A young woman approaches their table. She appears to be a tourist and is asking for directions to the Cornerhouse. She has a map with her and Aaron points out the route she needs to take. After a couple of minutes, Aaron realises his phone is nowhere to be seen and assumes the woman must have taken it. He'd put his mobile - the latest iPhone which he's quite proud of - on the table in front of them and when the woman put the map down, she must have swiped his phone from underneath it.

He's furious and quickly runs down the road in the direction the woman went – she can't be that far away. He's seething by this point. It dawns on him that the phone remembers his password for his Amazon account - the thief could buy a load of stuff through 1-Click ordering and he wouldn't even realise it. As well as losing all his numbers he's also lost all the mp3s he's bought and all his photos (some of which he wishes he'd got round to deleting...)

Having had a good look around the surrounding streets and a couple of nearby pubs Aaron is resigned to the fact he will not find the woman – or his phone. He decides to drown his sorrows with Kieran. Aaron doesn't think of going to the police. There's nothing much they could do - it's not like the phone's insured or anything. And anyway, he doesn't really trust the police.

The woman, Oana, always poses as a tourist and manages to get hold of about 15 phones a day. She's only been in the country for two months and needs to pay back the guy who arranged for her to enter the country illegally. She's one of many people he organises to be shipped over from Eastern Europe. If she doesn't keep up her quota of phones, she's likely to get a beating from his associates – that happened to her friend last week, when she couldn't get hold of enough phones because she was ill. The guy who 'owns' Oana sells the phones on to a contact of his who has a network of couriers taking the mobiles on flights to India.

## Design Out Crime

### *Mobile phone security challenge*

## Further information

### Why you should enter

We will award up to £100,000 (inc. VAT) to four winning teams, which must include designers and technologists, to research and develop a solution that tackles mobile phone security.

In addition to funded R&D, teams will also benefit from:

- 
- *expert guidance from leading specialists*

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  - *visibility at a showcase in early 2010 and a national exhibition in 2011*

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  - *significant media coverage around the Challenge and winning teams.*

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### What the judges are looking for:

At this stage the judges will be looking for an innovative approach to the Challenge.

On the application form, the team should demonstrate:

- 
- *How the team of designers and technologists will work together*

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  - *Your proposed research and working methods, demonstrating how you would gain insight into and understanding of the issues of mobile phone security*

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  - *How you intend to understand the design issues from the end user's experience of the phone*

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  - *How you propose to meet the requirements of the Challenge creatively and innovatively with a durable solution*

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  - *How you will consider the economic, social and environmental impact of your project*

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  - *Your approach to prototyping and testing your design ideas*

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  - *Your suggested approach to measuring the impact of your solution*

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### Who can enter?

The Challenge is open to any company based in the European Union.

Teams must include representatives from both the design and technology sectors. Individual consultancies with demonstrable experience in both technology and design may enter as a team.

Designers or technologists wishing to form more than one team must submit each application separately. However, entrants cannot be part of more than one winning team.

Teams may want to include other professional expertise.

### Forming a team

Sign up to the Challenge network at [www.mobilephonesecuritychallenge.ning.com](http://www.mobilephonesecuritychallenge.ning.com) to meet designers and technologists who are interested in forming a team.

We will run an information and networking event at the Design Council on Tuesday 19 May to pair up designers and technologists and to provide background information about the Challenge and the issues around mobile phone security.

# Design Out Crime

## Mobile phone security challenge

### Further information

#### Challenge timeline

Milestone	Date
<b>Monday 20 April</b>	<i>Challenge launches</i>
<b>Tuesday 19 May</b>	<i>Information and networking event - optional session to learn more about the Challenge, the issues and to meet potential partners</i>
<b>Friday 29 May</b>	<i>Entry deadline - all completed application forms due by 17:00</i>
<b>1-5 June</b>	<i>Screening</i>
<b>Friday 12 June</b>	<i>First round shortlisting - up to eight teams will be selected to present to the judging panel. Selected teams will be notified by 17:00</i>
<b>Friday 19 June</b>	<i>Shortlisted team presentations at the Design Council - Teams must ensure that they are available for the shortlist interview date prior to entering</i>
<b>Monday 22 June</b>	<i>Four winning teams announced</i>
<b>Friday 10 July</b>	<i>Concepts presented to expert panel</i>
<b>Friday 9 October</b>	<i>Progress presentation to expert panel</i>
<b>Friday 11 December</b>	<i>Final prototype presentation to expert panel</i>
<b>Friday 15 January 2010</b>	<i>Final deadline</i>
<b>TBC</b>	<i>Showcasing of final products/solutions</i>

#### Expert panel

Submissions will be judged by a panel of leading specialists with expertise in design, mobile technology and security.

#### Chair

*Simon Waterfall, Co-founder POKE,*

#### Panel

*Steve Babbage, Security Technologies Manager & Group Chief Cryptographer, Vodafone Group R&D*

*Mark Delaney, Director, Connect Design, Nokia*

*Josh Dhaliwal, Co-founder, Mobile Youth*

*Richard Martin, Business Security Consultant, APACS*

*Joe McGeehan, Managing Director, Toshiba Research Lab and Professor of Communications and Engineering at the University of Bristol*

*Dr Walter Tuttlebee, Executive Director, Mobile VCE*

## Design Out Crime

### Mobile phone security challenge

## Frequently asked questions

### What if I do not have any contacts in the design/technology sector?

Sign up to the Challenge network at [www.mobilephonesecuritychallenge.ning.com](http://www.mobilephonesecuritychallenge.ning.com) where you will be able to meet potential partners and collaborators as well as find resources, key dates and other useful information.

We will run an information and networking day at the Design Council on Tuesday 19 May to pair up designers and technologists and to provide background information about the Challenge and the issues around mobile phone security. Please register for this event at [www.mobilephonesecuritychallenge.ning.com](http://www.mobilephonesecuritychallenge.ning.com).

### Will I be asked to free pitch?

No. We are not asking for creative work for the judging process. On the application form you will need to demonstrate your credentials, share case studies that illustrate your abilities and include an 800 word Statement of Intent on your aspirations for the project.

### How do I enter?

Email your completed application form (available at [www.mobilephonesecuritychallenge.ning.com](http://www.mobilephonesecuritychallenge.ning.com)) to [crimechallenge@designcouncil.org.uk](mailto:crimechallenge@designcouncil.org.uk) by 17:00 Friday 29 May. Entries will be acknowledged by email.

No other material will be considered at this point but shortlisted teams may be required to supply further information for the shortlist presentations on Friday 19 June.

By submitting an entry to the Mobile Phone Security Challenge you agree to abide by the terms and conditions (see page 9).

### What are the judges looking for?

The judges are looking for teams that have both an innovation perspective on the issues and the ability to carry the project through to completion within the timeframe.

### What dates do I need to be aware of?

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*Entry deadline:*  
*Friday 29 May 2009*

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*Shortlist presentations:*  
*Friday 19 June 2009*

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*Final product deadline:*  
*Friday 15 January 2010*

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No extensions can be given to these deadlines under any circumstances.

### How many teams will be shortlisted?

Up to eight teams will be invited to present at the shortlist interview. Of these eight, four teams will be chosen by the judging panel and awarded up to £100,000 to develop and prototype their ideas.

### When will I hear any news?

If you are one of the shortlisted teams you will receive a call by 17:00 on Friday 12 June to invite you to be interviewed by the judges on Friday 19 June. It is important that you are available on this date, as you will be removed from the shortlist if you cannot attend the interview.

### Will my design be taken up by a phone manufacturer/service provider?

Although there are no guarantees that the winning designs will be taken up by a phone manufacturer or service provider, the competition offers access to world leading specialists and exposure through print and online media.

### How and when will funds be available for the winning teams?

Up to £100,000 (including VAT) will be available to each of the four winning teams for research and development. Funds will be paid in three instalments (in September, November and January 2010) to be invoiced by the winning team based on expenditures.

### Who do I contact if I have a query?

Post your query on the forum at [www.mobilephonesecuritychallenge.ning.com](http://www.mobilephonesecuritychallenge.ning.com). Alternatively, if you have any further questions email [crimechallenge@designcouncil.org.uk](mailto:crimechallenge@designcouncil.org.uk).

# Design Out Crime

## Mobile phone security challenge

### Terms & conditions

The following terms and conditions apply to all Mobile Phone Security Challenge [The Challenge] entries.

The Design Council, Technology Strategy Board and Home Office will retain your submission, together with all associated material.

For the purposes of reproduction and display the Design Council, Technology Strategy Board and Home Office reserve the right to make minor alterations to your submission and request additional information.

The Design Council, Technology Strategy Board and Home Office reserve all rights in the name Mobile Phone Security Challenge and its marque.

You grant the Design Council, Technology Strategy Board and Home Office the right to:

- *Copy the submission in whole or in part*
- *Scan the submission in whole or in part*
- *Reproduce any trademarks used in the submission (whether registered or otherwise)*
- *Reproduce the submission in whole or in part, in printed, electronic or any other medium including the Design Council, Technology Strategy Board and Home Office websites*
- *Feature the submission in whole or in part in exhibitions*
- *Enter the submission in a databank, which Design Council, Technology Strategy Board and Home Office may create*

You confirm that you are the legal owner of all intellectual property and moral rights in the submission and, if not, that you have obtained all the necessary permissions and licenses from third parties.

You agree to indemnify the Design Council, Technology Strategy Board and Home Office against any third party claims that should arise from your submission to The Challenge.

The panel's decision as to what qualifies for The Challenge is final.

The Design Council, Technology Strategy Board and Home Office will only accept submissions from businesses registered in the UK.

We reserve the right to immediately terminate your participation in the competition whereupon your submission will be withdrawn if we believe you are in breach of any of your obligations representations or warranties under the terms or if you otherwise conduct yourself in a manner which is inappropriate or unsuitable as determined at our reasonable discretion including but not restricted to your failure to comply with the project milestones.

In the event of termination we reserve the right to select a further entrant to take part in the competition.

As a condition of funding all awardees will be required to submit an 'end of contract' report.

#### Termination/Withdrawal

The Design Council, Technology Strategy Board or the Home Office may terminate your participation in the competition whereupon your submission will be withdrawn with immediate effect (or following such notice period as it sees fit) without prejudice to any of its right or remedies, by giving notice to you if:

- *you fail to comply with the project milestones*
- *you commit a breach of any term of this Agreement and (if such breach is remediable) fail to remedy that breach within a period of 7 days after being notified in writing to do so*
- *any liquidator, Trustee and bankruptcy, receiver, administrative receiver, administrator or similar officers is appointed over, or in respect of you or any part of your business or assets*
- *a significant member of your team dies or, by reasonable illness or incapacity (whether mental or physical), is in our reasonable opinion incapable of managing his or her own affairs.*

On withdrawal of your submission from the competition by you or termination of your participation by the Design Council, Technology Strategy Board and Home Office you shall within 7 days of giving or receiving notices of the withdrawal immediately account to the Design Council, Technology Strategy Board and Home Office as to how the competition money has been spent. The Design Council, Technology Strategy Board or Home Office reserve the right to require the return of all or part of the competition monies.

## Design Out Crime

### *Mobile phone security challenge*

## Terms & conditions

### **Confidentiality**

You undertake not at any time to disclose, reveal, communicate or otherwise make public any information relating to the Design Council, Technology Strategy Board or Home Office, its business, personnel, servants, agents or officers to anyone.

You may not publicise your involvement in the competition without the prior written permission of the Design Council, Technology Strategy Board and Home Office.

You agree as a condition of entry into the competition that you will participate in all publicity required by the Design Council, Technology Strategy Board and Home Office and/or third parties connected with the competition.

You should not without the specific prior written consent of the Design Council, Technology Strategy Board and Home Office publish or disclose any of the information in connection with the competition and particularly, without limitation, to a representative of the media, in whatever form. You should not be entitled to give interviews or be allowed in articles or reports in respect of the competition with any third party. All rights in relation to the competition and your involvement therein shall vest exclusively with the Design Council, Technology Strategy Board and Home Office.

Without limitations to any other rights under this Agreement, the Design Council, Technology Strategy Board and Home Office shall be entitled to refer to your submission in the competition with all publicity, marketing and competition in connection therewith.

For the avoidance of doubt, any rights in the name and title of the competition and the format rights of the competition will vest exclusively in the Design Council, Technology Strategy Board and Home Office for their own use (at their absolute discretion).

Your submission will be included in a showcase (early 2010) and it will be your responsibility to ensure that you have submitted any patent applications or any other intellectual property right protection applications for the submission prior to the exhibition.

You confirm that you have not been induced to enter into this competition based upon anything other than these terms and conditions and the official promotional material.

In accordance with the Copyright, Designs and Patents Act 1988 Sections 77 and 78, the Design Council, Technology Strategy Board and Home Office agree to assert your moral rights in the submission in a form to be at the complete discretion of the Design Council, Technology Strategy Board and Home Office.