

Thatcham Research: War on vehicle crime



On the outskirts of a sleepy village in Berkshire England you can find Thatcham Research.

Formed in 1969 Thatcham was originally setup to tackle vehicle repair costs and keeping insurance costs lower leading to reduced car insurance premiums.

This changed however when the United Kingdom was struck by an exceedingly high level of vehicle crime made up mostly of joy-riding, fraud and a small amount of organised crime. So in 1992 at the request of the UK Government, Thatcham started to test whole vehicle security on behalf of the motor insurance industry. This work led to the Home Office design out crime group becoming very successful.

Key UK Motor Insurance Stakeholders and member companies being;



Other key stakeholders are:



Government

- **UK**

- Normally represented by the Home Office but can be the Department of Transport (DfT) or the HM Treasury. This depends

- **SMMT**
 - Vehicle Manufacturers
 - Security System Manufacturers



- **UK Law Enforcement**

- Metropolitan Police (approx. 40%)
- All other Police forces
- NCA
- NaVCIS
- Border Agency

Thieves are always evolving to overcome security systems this has helped make the UK vehicle fleet the most secure fleet in the world with equipment fitted as standard.

In the last few years we have noted a change in technically advanced vehicles as well as the thieves' equipment that they use. Vehicle crime is a Global business today, more so now than it has ever been before. This century has seen a change from the age of vehicles being targeted, 10 year old cars stolen (1992) to a change to 5 years old or less or put it another way from joy riding to vehicle parts and or of whole of vehicles being shipped overseas.

Type of old car in the 1990's

Type of modern car 2015



A car is not just an object not of desire but of monetary value. It may mean the world to you but Organised Crime Gangs (OCG's) will see it as a pot of potential currency.

Whether it's the car itself or the valuables within it, your car is as much a target for thieves as it ever was, if not more so as it's now a Global player.





According to the Office for National Statistics, there were almost 358,000 reported instances of thefts from or of a motor vehicle in 2014. And with car thieves finding new ways to make car crime work for them, it isn't a problem that's going away any time soon.

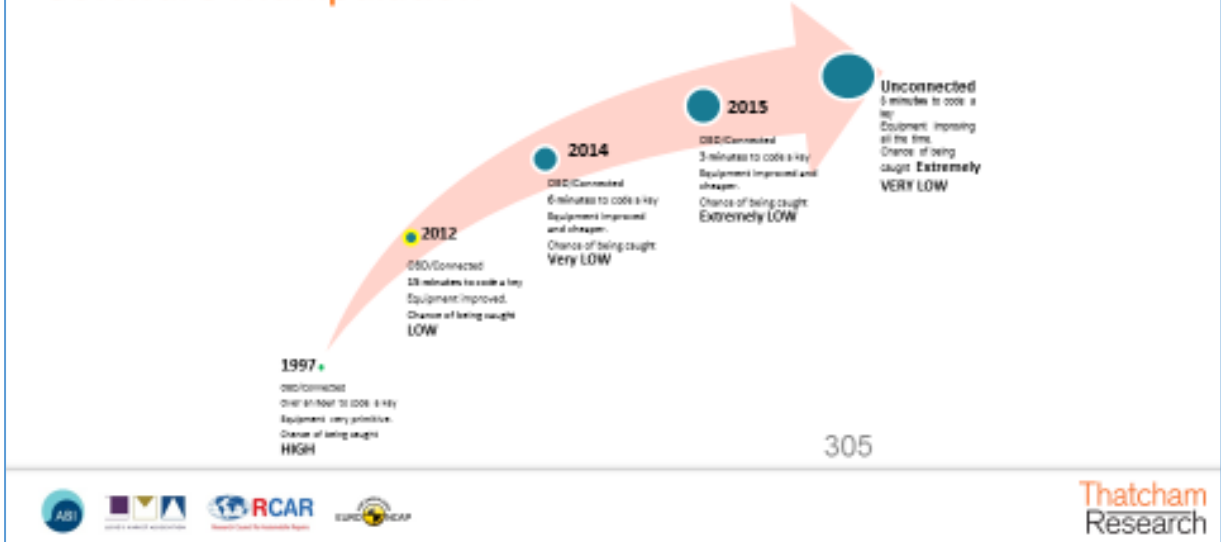
Owners will say my car has an alarm and an immobiliser, "That's me covered" Well no. It's true that modern security systems are great deterrents but this depends on the country you're in. Different countries have different requirements leading to completely different cars under the skin for security, the most similar to the UK are Swedish vehicles that happen to be tested by Thatcham for the Swedish market and their owners.

A UK and Swedish car could potentially get 5 and 4 stars on our star rating with other vehicles for other markets being as low as 1 and 1 stars

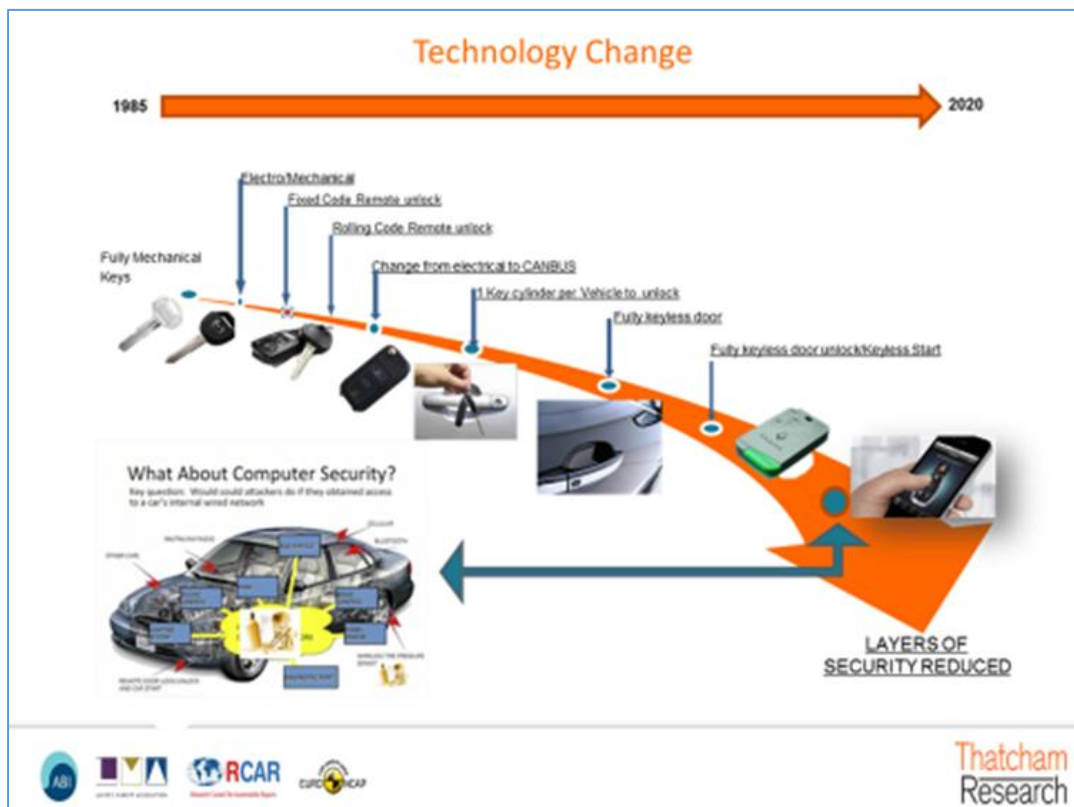
Research on USA market; Ford Taurus

Items Reviewed	Areas of Difference	UK Actual Stars	Non UK Actual Stars
Electronic Alarm Systems	X		
Electronic Immobiliser Systems	X		
Key Component Management	Based on process		
Peripheral Locks & Mechanisms	X		
Additional Security Features	X		
Standard Fit Electronic Equipment	X		
Glazing	X		
Ignition / Steering Column Lock	X		
Vehicle Identification	X		
Items		UK Actual Stars	Non UK Actual Stars
Star Rating out of 5 Stars - Theft Of & Theft From		? x ?	2 x 1
Road wheel security missing (Effects theft from)	X		1 star penalty not deducted

Time Line: An Old Threat Revisited Cyber Crime Software Manipulation



Theft statistics shows that thieves are now targeting vehicles from Ford Fiesta's to Range Rover in Western Europe but at a much younger age of vehicle. So what would have changed, well the vehicles have but where we had many layers of security we now have one and as soon as that is beaten there are no more layers to crack. And unless manufacturers check the security of new systems or have new systems tested then things could get worst and safety systems could be interfered with.



But there's much more we can do to keep vehicles secure than just pressing the button on your car's remote and walking away.

The public has their role to play in not making things too easy for the thief, simply by paying attention they can hear the central locking activating in most modern cars. The sound it makes is normally a heavy-sounding clunk or click. Many modern cars also feature a visual signal, in the form of flashing indicators.

If a member of the public doesn't get either of these aural or visual signals, it could be a sign that the fob isn't working properly. This will mean the locking isn't activating when it should, leaving the vehicle unlocked and unprotected; if there is an alarm fitted, the likelihood it won't be activated either.

But the cause could be something more sinister. Thatcham has seen that some thieves use remote locking blocking devices to target cars – preventing the signal from your fob from reaching the car, and ensuring it stays unlocked so that they can steal whatever's inside.

Jamming/Blocking

Some thieves use remote jammers that can stop the locking of a vehicle or block tracking systems, phones or police radios do not work in the area where these are being used.



On Board Diagnostic Theft Equipment (OBD)



OCG thieves use OBD equipment which can come in many different forms the cost of the equipment originally was £15000 but can now be purchased for around £5 depending on target vehicle.

Thatcham has taken to testing if countermeasures against OBD tools will work or there is the possibility of insurance penalties if they do not.

Public awareness: Think about where keys are kept



Car security systems have advanced so far now that the easiest way for a thief to steal the car is:

- Steal the keys themselves

Letter box fishing is as it says, simple put a pole through the letter box to hook the vehicle keys

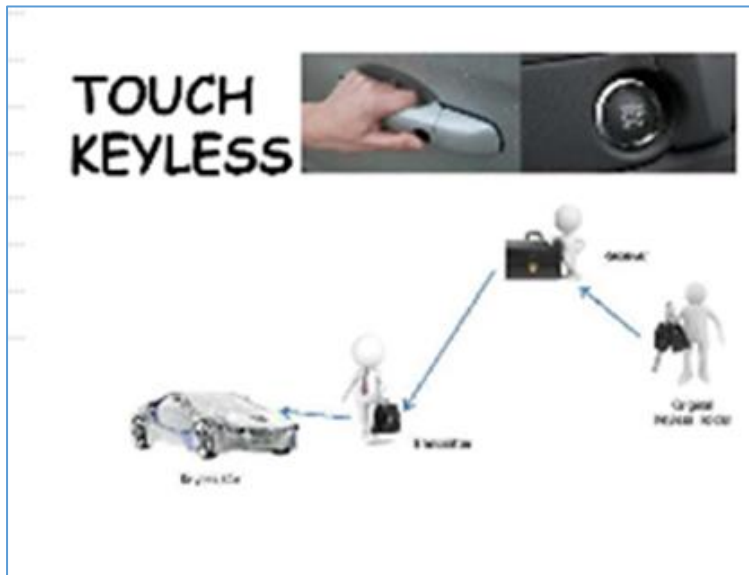
- On Board Diagnostic devices

Plugging in an OBD tool and simply manipulating the software to make the vehicle start.

When we first saw this the time to code a key was over 1hour, now it can be as little as 6 seconds



- Use of relaying of key fob signals



This can mean picking up signals from a jacket or hand bag and relaying the signals to a car so think about which pocket you're keeping your keys in when you're out and about. And when you're at home, make sure you don't leave your keys near to an open window, or even within reach of the letterbox.

The German automotive roadside assistance organisation ADAC have performed their own tests on 24 different vehicles with keyless technology from 19 different manufacturers like Audi and SsangYong, and found every single one could be broken into using a simple homemade electronic device and have confirmed independently what Thatcham has been saying. But this does not mean we are going to see all keyless vehicles stolen it does show however that OEM's may design crime in very easily without realising it.

Great care should be taken with all new designs and with the use of new technologies therefore maintaining the 'Design Out Crime' structure.

All of these methods undermine a vehicles ability to counter theft. But don't take your keys upstairs to bed with you.

Most recently stolen vehicles at the time of writing in numbers are:

1. Range Rover Sport
2. BMW X5
3. Range Rover Vogue
4. Mercedes C-class

5. BMW 3-series
6. Mercedes C63 AMG
7. BMW 5-series
8. Audi RS4
9. Audi Q7
10. Range Rover Autobiography

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