

## Mandatory Installation of Event Data Recorders: The eCall System

### BACKGROUND

On 26 November 2012, the European Commission produced a draft Regulation regarding the “*harmonised provision for an interoperable EU-wide eCall*” to take place by 1 October 2015.<sup>1</sup> Its first reading took place in February 2014 and 73% of MEPs voted in favour of the eCall system.<sup>2</sup>

However, only 24 UK MEPs voted in favour whereas 32 voted against deployment of eCall.<sup>3</sup> This highlights the concerns the UK have regarding the impact eCall may have on privacy and data protection. The European Scrutiny Committee, a select committee in the House of Commons that assess draft EU legislation, continues to push for negotiations on the draft Regulation.<sup>4</sup>

**Robert Goodwill MP**, the Parliamentary Under-Secretary of State for Transport, led negotiations with the European Commission whilst the ESC is continuing to highlight areas that need to be addressed before the deployment of eCall in the UK.

Having been voted through by the European Parliament on the First Reading, the Council of Ministers approved eCall on March 2 2015. The slightly amended proposal was put before the European Parliament on April 27 2015 for its second and final reading. The European Parliament approved the Legislation, meaning all cars sold in the EU after March 31 2018 will be required to include eCall technology.

The amendments made by the Council include formally stating that the installation of the eCall system is permanent in nature, but also tightening data protection, by stipulating that:

*(i) eCall data can only be used for the purpose of handling emergency situations and that they shall automatically be deleted ; (ii) there can be no exchange of data between the 112-based eCall system and any third party system ; (iii) the owner's manual shall provide information to the owner on the processing of data by either system.*<sup>5,6</sup>

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<sup>1</sup> European Union, *Draft Regulation no 305/2013*. <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013R0305&from=EN>

<sup>2</sup> VoteWatch Europe. <http://www.votewatch.eu/en/deployment-of-the-ecall-in-vehicle-system-draft-legislative-resolution-vote-legislative-resolution-o.html>

<sup>3</sup> Ibid.

<sup>4</sup> European Scrutiny Committee, *Forty-seventh Report of Session 2013-14*.

<http://www.publications.parliament.uk/pa/cm201314/cmselect/cmeuleg/83-xlii/83xlii.pdf>

<sup>5</sup> <http://www.europarl.europa.eu/news/en/news-room/content/20150424IPR45714/html/Automatic-emergency-call-devices-in-all-new-car-models-from-spring-2018>

<sup>6</sup> <http://www.europarl.europa.eu/oeil/popups/printsummary.pdf?id=1380540&l=en&t=E>

## KEY POINTS

- There is an important distinction to be made between eCall and the Event Data Recorders (EDRs). Whilst the eCall system may not record the location of the car constantly, the EDR does have that capability.
- There are concerns that the EDRs ability to gather extensive data can and will be misused as:
  - the data could be accessed by hackers to track individuals' location.
  - insurance companies can use this to promote personalised insurance quotes by recording how individuals drive.
  - police forces have already been using eCall systems to track suspicious motorists.<sup>7</sup>
- The installation of the EDR will be mandatory, a move that goes against British principles of liberty and freedom of choice.
- The eCall system is not cost efficient nor will it have a significant impact on safety in the UK.

## WHAT IS eCALL?

### *What is the purpose of eCall?*

The European Commission has stated that the purpose of eCall is *"to help mitigate the consequences of serious road accidents across the EU."*<sup>8</sup>

### *Event data recorders and eCall*

There is an important distinction to be made between eCall and EDRs:

- **eCall** is a technology designed to send in-vehicle emergency calls using the EU-wide 112 emergency telephone number which defaults to 999 in the UK.
- Whereas an **EDR**, also commonly known as a '**black box**', is fitted in vehicles and then the eCall system installed on it.

In the event of an accident, or if manually activated, eCall creates a voice link to the closest Public Safety Answering Point (PSAP) through the Mobile Network Operator (MNO) and sends an emergency message known as the Minimum Set of Data (MSD). The information in the MSD lets the emergency services know the exact location of the vehicle (see '*No clarity on the minimum set of data's contents*' for more detail on MSDs).

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<sup>7</sup> The Sunday Times, *Officer, are you tracking me?*

<http://www.thesundaytimes.co.uk/sto/ingear/cars/article1366310.ece>

<sup>8</sup> The European Commission, *eCall: automated emergency call for road accidents mandatory in cars from 2015*.  
[http://ec.europa.eu/commission\\_2010-2014/kallas/headlines/news/2013/06/ecall\\_en.htm](http://ec.europa.eu/commission_2010-2014/kallas/headlines/news/2013/06/ecall_en.htm)

## ***How effective will eCall be?***

Confusingly, there appears to be differing statistics available from the European Commission on how effective eCall could be:

- One estimate notes that when fully deployed, eCall could save up to 2,500 lives a year, ease severity of road injuries and reduce congestion due to speeding up emergency response times by 40% in urban areas and 50% in the countryside.<sup>9,10</sup>
- However, an alternative European Commission estimate is that eCall could save up to 747 lives each year once fully deployed and that emergency response times in urban areas will increase by 60%.<sup>11,12</sup>

**The inconsistency of results published by the European Commission undermines the legitimacy of the European Commission's claims.**<sup>13</sup>

## **PROBLEMS WITH THE eCALL SYSTEM AND EVENT DATA RECORDERS**

### ***The eCall system will be mandatory***

The European Commission has called for eCall devices to be fitted in all new types of passenger and light commercial vehicles, such as small vans, with the Commission estimating that “2033 will see full penetration of the technology.”<sup>14</sup>

As a result the use of EDR and eCall will become a mandatory part of vehicles, as once it has been installed drivers will be unable to remove the technology. **EDRs can also not be switched off once they have been installed in the vehicle.**<sup>15</sup>

It is important to note that technology similar to eCall can already be purchased by individuals if they wish to voluntarily install it in their vehicle.

The British Government has expressed concerns about the mandatory aspect of the eCall system. **Robert Goodwill MP**, Parliamentary Under-Secretary of State for Transport, has stated that “unfortunately it has...become clear that there is very little support for the UK

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<sup>9</sup> eCall: Time for Deployment. <http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52009DC0434>

<sup>10</sup> Ibid.

<sup>11</sup> European Scrutiny Committee, *Forty-seventh Report of Session 2013-14*.

<sup>12</sup> European Commission, *Project VERONICA II*.

[http://ec.europa.eu/transport/road\\_safety/projects/doc/veronica2\\_final\\_report.pdf](http://ec.europa.eu/transport/road_safety/projects/doc/veronica2_final_report.pdf)

<sup>13</sup> European Scrutiny Committee, *Forty-seventh Report of Session 2013-14*.

<sup>14</sup> European Scrutiny Committee, *Twelfth Report of Session 2013-14*.

<http://www.publications.parliament.uk/pa/cm201314/cmselect/cmeuleg/83-xii/8310.htm>

<sup>15</sup> The Daily Mail, *EU to bug every car in UK with tracker chips – and Ministers admit they are powerless to stop the Big Brother technology*. <http://www.dailymail.co.uk/news/article-2625244/EU-bug-car-UK-tracker-chips-Ministers-admit-powerless-stop-Big-Brother-technology.html>

position [against deployment of the eCall in-vehicle system] and no possibility of blocking this legislation.”<sup>16</sup> In order to attempt to remedy this issue he has stated that he is attempting to negotiate for:

- regulation to be applied to new models of vehicle only;
- exemption for low volume vehicles;
- exemption for special purpose vehicles;
- exemptions to be specified in the Regulation, rather than left to the Commission to adopt through a delegated act.<sup>17</sup>

### **Can the UK influence changes to eCall?**

According to research conducted by **Business for Britain** into Britain’s influence in the Council of Ministers, since 1996 “the UK has not managed to prevent a single proposal placed in front of the Council from becoming European law.”<sup>18</sup> In 18 years the UK have opposed 55 measures and all have gone on to become British law. As chances that the UK will be able to prevent the deployment of eCall are slim, it is vital that the Government push for further amendments to the draft Regulation in order to safeguard individuals’ privacy.

**Whilst the attempts by Robert Goodwin MP and the European Scrutiny Committee to influence changes to the eCall system are welcomed, more needs to be done to ensure that a wider range of viable alternatives for individuals as opting for a low volume vehicle, special purpose vehicle or older vehicle could prove to be difficult and costly for those who wish to protect their privacy.**

***“The costs to the UK outweigh the benefits.”***<sup>19</sup>

The European Commission has stated that the mandatory nature of eCall is to ensure greater road safety. However, as the Parliamentary Under-Secretary of State for Transport, **Stephen Hammond MP** has highlighted, there are huge disparities between Member States with regard to road safety: “Mandating eCall across the EU would...not be effective for Member states such as the UK which already have a good road safety and high standard of emergency response service”.<sup>20</sup>

The UK’s effective system means that, as highlighted in a report by the Independent Transport Research Laboratory, **eCall would only reduce fatalities by 1% and serious**

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<sup>16</sup> Ibid.

<sup>17</sup> European Scrutiny Committee, *Forty-seventh Report of Session 2013-14*.

<sup>18</sup> Business for Britain, *Measuring Britain’s influence in the Council of Ministers*.  
[http://forbritain.org/measuring\\_britains\\_influence\\_council\\_ministers.pdf](http://forbritain.org/measuring_britains_influence_council_ministers.pdf)

<sup>19</sup> Ibid.

<sup>20</sup> European Scrutiny Committee, *Twelfth Report of Session 2013-14*.

**injuries by 0.5%.**<sup>21</sup> Therefore, it is arguable that the European Commission's perceived impact of eCall cannot appropriately be applied to the UK.

The Minister for Culture, Communications and the Creative Industries, **Edward Vaizey MP**, has also warned that the implementation of eCall would lead to additional notifications for the same accident, creating more work for emergency services.<sup>22</sup> **This suggests that the deployment of eCall in the UK could potentially be detrimental to safety rather than beneficial.**

Additionally, there have been arguments made that eCall will not be cost effective for the UK. The report, '*eCall UK 2013 Review and Appraisals*', published by the Atkins for the Department of Transport, , shows that:

- the Benefit Cost Ratio for the UK of mandatory eCall would be 0.16 and even applying more optimistic values to the benefits this would only reach 0.44;
- the estimated costs for the in-vehicle eCall technology in the UK are between £320-£445 million for new vehicle purchasers; and
- even using the best estimates of benefits in terms of reduced casualties indicates that the UK would not reach break-even point within the 20 year appraisal period.<sup>23</sup>

It therefore appears that it would **not be appropriate or efficient to use eCall as a blanket solution for all Member States**. Due consideration of the extent of deployment and further amendments are required before the Government should accept the eCall system for Britain.

### ***No clarity on the minimum set of data's contents***

The European Commission has stated that the MSD includes the exact location of the crash, time and vehicle description.<sup>24</sup> However, according to a report by the European Telecommunications Standards Institute, the MSD also includes driving direction resulting from accurate satellite-based data.<sup>25</sup>

Project VERONICA's report, looking into the EU's three-year study into the feasibility of installing EDRs in all new cars, highlighted that the MSD would also include:

- initial and collision speeds;

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<sup>21</sup> The Metro, *The great car debate: Should eCall emergency system come to Britain?* <http://metro.co.uk/2012/08/31/the-great-car-debate-should-ecall-emergency-system-come-to-britain-559867/>

<sup>22</sup> European Scrutiny Committee, *Twelfth Report of Session 2013-14*.

<sup>23</sup> European Scrutiny Committee, *Forty-seventh Report of Session 2013-14*.

<sup>24</sup> European Commission, <http://www.imobilitysupport.eu/ecall/>

<sup>25</sup> ETSI, *What is eCall?* [www.ietf.org/proceedings/87/slides/slides-87-ecrit-1.ppt](http://www.ietf.org/proceedings/87/slides/slides-87-ecrit-1.ppt)

- change in velocity due to collision;
- longitudinal acceleration or deceleration;
- transverse acceleration or deceleration;
- angle of longitudinal vehicle axis;
- status of brake light, indicator and head lights;
- use of throttle, steering, horn and clutch;
- monitoring of displayed error messages.<sup>26</sup>

According to the report, this data is necessary in order to “enable the emergency services to assess the seriousness of the accident and thus to take appropriate and tailored action.”<sup>27</sup>

Additionally, the report states that the EDR will record for 20 seconds before the accident and 10 seconds after.<sup>28</sup> Since the Project’s report was published, the European Commission has not made any remarks regarding what recording will take place before and after an event. Therefore, it is unclear whether or not this data will be included in the MSD as standard.

**If the MSD does include data before and after the incident this means that the EDR is not dormant. In order to obtain data prior to the incident the EDR must be recording and erasing continuously.**

**With such detailed data available, there are concerns that the deployment of eCall will enable opportunities for mission creep.** For example, **Robert Oulds, director of Bruges Group**, believes that there are hidden motives behind the eCall scheme stating that “Over time, this will be converted into a system that will be used to fund the eU through road pricing using the EU’s expensive satellite system. It has been an ambition of the EU to fund this satellite system, and its space programme through road pricing. This technology makes it feasible.”

In order to avoid possibilities of mission creep, it is crucial that clarity is established regarding what is included in the MSD in terms of type of data collected, whether or not it is recording and erasing on a continuous loop until an incident occurs and, if so, whether this erased information is still retractable. This must be considered before the Government accept eCall.

### ***Additional uses of the EDR***

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<sup>26</sup> European Commission, *Project VERONICA I*. [http://www.veronica-project.net/index.php?option=com\\_docman&task=cat\\_view&gid=25&Itemid=27](http://www.veronica-project.net/index.php?option=com_docman&task=cat_view&gid=25&Itemid=27)

<sup>27</sup> Ibid.

<sup>28</sup> Ibid.

# BIG BROTHER WATCH

## DEFENDING CIVIL LIBERTIES, PROTECTING PRIVACY

Although the European Commission has made assurances to the Member States that the only purpose of the EDR is to house the eCall system, there is no guarantee that the EDR will not be used for additional purposes. The European Commission has said that “*no tracking or transmission of data takes place during the normal operation of the system*”, however this does not account for potential uses of the EDR that do not consist of the normal operations.

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- **Hacking**

As the EDR has the ability to record the vehicle’s exact location, if it was hacked detailed information about the driver’s location and journey details would be available.

**Jack Bergquist**, of the information company HIS, has stated that: “*People being able to hack into the car is a big issue. If there’s a data system in a car, technically someone could hack into it.*”<sup>30</sup>

**Simon Davies**, of Privacy International, has warned that in future such a system could be combined with other technology to keep a constant watch over motorists: “*If you correlate car tracking data with mobile phone data, which can also track people, there is the potential for an almost infallible surveillance system.*”<sup>31</sup>

- **Insurance Companies**

Even if the eCall system does not require the collection of all the data suggested in Project VERONICA, the project highlights the ability for the EDR to record such data. The presence of the EDR in all new cars, and its ability to record these details, could be exploited by insurance companies.

Insurance companies, such as AA Drivesafe, Drive Like a Girl and Hastings Direct SmartMiles, are already starting to use voluntarily installed black boxes to track individual’s driving habits in order to calculate more accurate insurance premiums.<sup>32</sup> The increased use of EDRs in cars, whether for eCall or not, would make it harder for those who do not wish to have an EDR to insure their car.

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<sup>29</sup> European Commission, *eCall Do you have any concerns for your privacy?*

<sup>30</sup> BBC News, ‘*Every new car*’ connected to web by 2014. <http://www.bbc.co.uk/news/technology-21411335>

<sup>31</sup> The Daily Telegraph, *EU proposes black boxes for cars.*

<http://www.telegraph.co.uk/motoring/news/6479603/EU-proposes-black-boxes-for-cars.html>

<sup>32</sup> Full list can be found at <http://www.confused.com/car-insurance/specialist/telematics/providers>

# BIG BROTHER WATCH

DEFENDING CIVIL LIBERTIES, PROTECTING PRIVACY

Tom Ellis, of the insurance comparison site Gocompare, has stated that: *“there will be reasons for people opting out [of the black box installation]...but they will have to accept a higher premium to insure their car.”*<sup>33</sup>

- **Law enforcement use**

This data has already been used by the police to track motorists. An article in *The Sunday Times* states:

*“Interpol, which co-ordinates police intelligence across 190 countries confirmed that some of its members are using the eCall system for surveillance operations, though it refused to say whether British police were using the technology in this way.”*<sup>34</sup>

The Sunday Times submitted a Freedom of Information request to ten police forces asking whether they were using eCall to track the movements of drivers. Five forces refused to disclose the information on national security grounds, two forces did not respond, one stated it would be too time-consuming to provide the information and two forces confirmed that they did not track drivers.<sup>35</sup>

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<sup>33</sup> The Mirror, *All new cars must have ‘black box’ spying device from next year.*

<http://www.mirror.co.uk/news/uk-news/new-cars-must-black-box-3563221>

<sup>34</sup> The Sunday Times, *Officer, are you tracking me?*

<http://www.thesundaytimes.co.uk/sto/ingear/cars/article1366310.ece>

<sup>35</sup> Ibid.