

OPINION UNDER SECTION 74A

Patent	GB2490802
Proprietor(s)	Alistair Bruce Kelman and Diana Elizabeth Kelman
Exclusive Licensee	
Requester	Alistair and Diana Kelman
Observer(s)	Reddie & Grose on behalf of YouView TV Ltd; Arqiva Limited
Date Opinion issued	15 February 2021

The request

1. The comptroller has been requested by Alistair Bruce Kelman to issue an opinion as to whether GB Patent 2490802 B is infringed by the YouView on demand TV service, a joint venture between BBC, ITV, Channel 4, Channel 5, BT, TalkTalk and Arqiva (all Registered Trade Marks and to be read as such throughout this Opinion). In particular, the request asks whether implementation of the invention set out in YouView TV Ltd's European Patent EP 3657804 B would infringe GB 2490802 B.
2. The patent entitled, "An improved PVR and a system for the provision of enhanced television services" was granted on 7 August 2013 to Alistair Bruce Kelman and is still in force in the UK.
3. The request was received on 2 December 2020 and was accompanied by a statement explaining the request along with two lengthy pieces of academic work relating to protection of sensitive personal data.
4. Observations were received on 22 December 2020 from Reddie & Grose on behalf of YouView TV Ltd and separate observations were received from Arqiva Limited.
5. Observations in reply were received on 12 January 2021 together with further submissions relating to data protection and privacy.

Matters to be considered by this Opinion

6. Section 74A of the Patents Act provides for the procedure where the Comptroller can issue, on request, non-binding opinions on questions of patent validity and on questions of patent infringement. Opinions on infringement or validity are limited to the matters set out in Patent Rule 93(6).
7. I will therefore not consider any questions relating to compliance with the General Data Protection Regulation (GDPR).

The patent

8. The patent relates to Personal Video Recorders (PVRs), which are purchased by viewers to convert digital broadcast audio and television signals for supply to the viewer's television set or visual display unit. The invention also relates to enhanced services, including delivery of targeted advertisements, which can be supplied using a PVR. The patent has 17 claims, of which claim 1 and claim 6 are independent, whilst claim 3 defines a system having PVRs of claim 1. These claims are reproduced below:

1. *A Personal Video Recorder (PVR) for decoding digital transmitted signals for supply to a viewer's television set comprising;*

first input connection means for connection to broadcast digital video and/or audio signals;

output means for connection to a viewer's television set;

control means to control operation of the television set;

first data storage means for temporary storage of a broadcast programme;

second data storage means for storage of targeted advertisements;

private data storage means arranged to receive from the viewer and to store a personal profile of the viewer; and

a firewall arranged to prevent external access to stored personal data.

...

3. *A system for supplying targeted advertisements to a plurality of viewers each having a PVR according to claim 1 or claim 2 comprising:*

central storage means to store a multiplicity of advertisements each having a header indicating a target personal profile of a target viewer; and

broadcast means to broadcast advertisements to the PVRs.

...

6. *In a broadcast television system to which a plurality of PVRs each under the control of an individual viewer are connected, a method of delivering targeted advertisements comprising the steps of:*

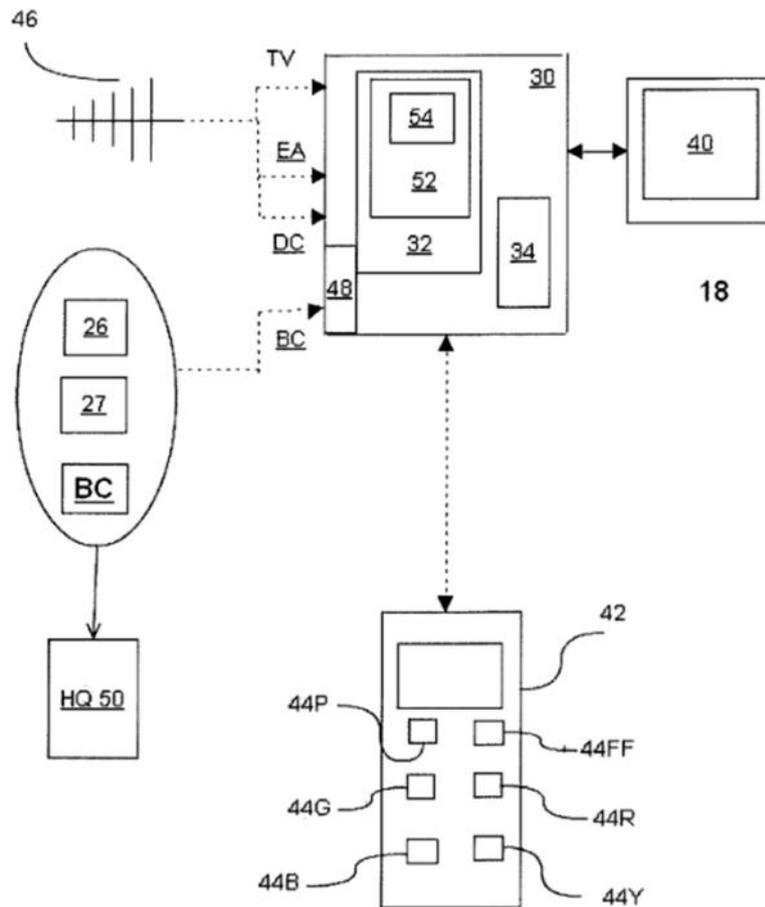
each viewer storing a personal profile in their PVR behind a firewall which is arranged to prevent external access to data stored in the PVR;

storing, in a central processing means, a multiplicity of advertisements each with a header indicating a target personal profile of a target viewer;

broadcasting, by broadcasting means, the multiplicity of advertisements and headers; and

each PVR storing only the advertisements having headers which match the stored personal profile.

9. The figure below illustrates a PVR according to the invention connected to a system permitting the supply of privacy-enhanced services. The PVR 30 contains a hard disc 32 and twin decoders 34. The PVR 30 supplies television and audio signals to a television set 40 and is controlled by a remote control 42. The PVR is connected to an aerial 46 and to the two-way communication back-channel BC which may be provided by a broadband service 26 or by a mobile telephone 27. The hard disc 32 is connected to the backchannel BC through a firewall 48 and, as shown, the backchannel is connected to a server in the headquarters HQ of a subscription service provider. The aerial 46 can receive three types of signal for providing an enhanced television service; a) broadcast television signals TV, which are arranged to be received in and stored by a first storage area 52 of the PVR 30; b) encrypted adverts EA, which are arranged to be received in and stored either by the first storage area 52 or by a second storage area 54 of the PVR; c) private data channel information DC, which may be stored either in the first storage area 52 or in the second storage area 54.

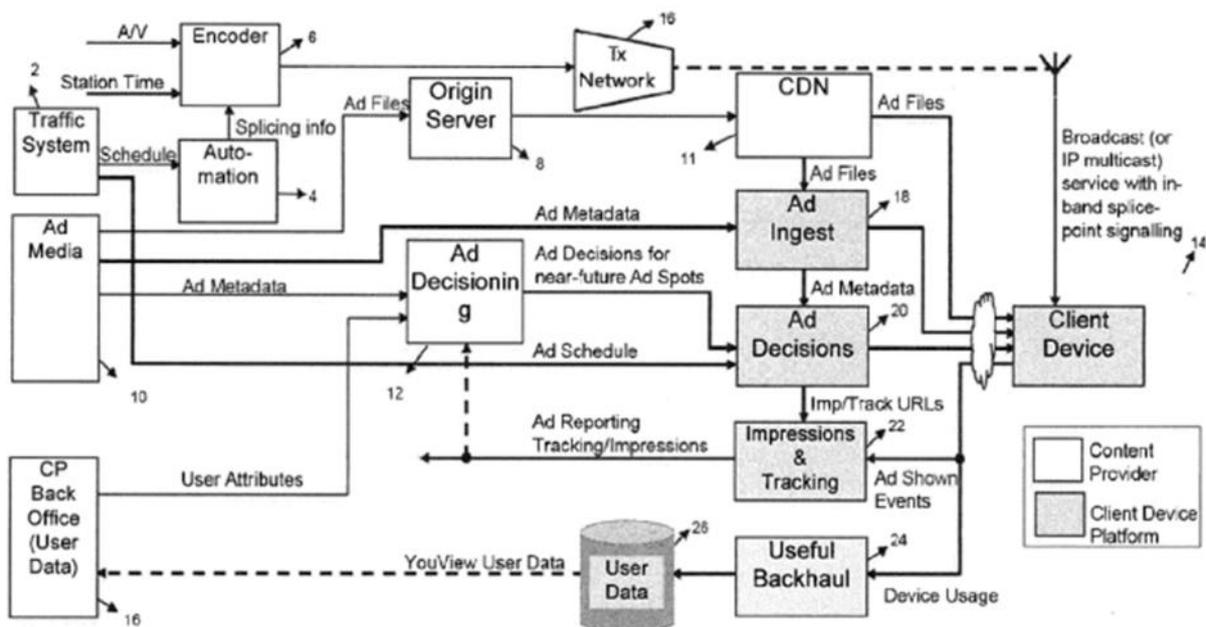


10. An important feature of a PVR 30 according to the patent is that the viewer can store in the PVR additional personal information which will permit highly targeted adverts while preserving privacy. The viewer may store information such as the number of adults and of children in the household and their ages, their interests, their ethnicity, the language they normally speak, and other sensitive details, together constituting

personal profiles of members in the household. Since the two-way communication with the service headquarters HQ via the backchannel BC is protected by the firewall 48, such information cannot be accessed by the subscription service supplier or any other external contact. However, headers associated with each advert stored in the first storage area 52 allow adverts to be selected by the PVR 30 for supply to the television 40 which are targeted on personal profiles which match at least one profile stored in the PVR.

YouView TV (EP 3657804 B)

11. YouView is an on-demand TV service of live digital channels. It combines catch-up TV with a library of on-demand television programmes, films and radio. YouView has record, pause and rewind TV functionality. A YouView box connects to the internet which allows new features and content providers to be regularly added.
12. YouView TV Ltd's European Patent, EP 3657804, describes a method and system for selectively inserting or replacing content in streamed or broadcast media content, such as streamed media channels typically received via a set top box by a plurality of users. This includes Dynamic Advert Insertions (DAI) for linear streamed channels, e.g. channels equivalent to conventional broadcast television channels, which enables adverts to be targeted at specific viewers in dependence on, for example, their viewing habits, previous adverts viewed, or preferences selected by a viewer. In the figure illustrating the system below, information on a user's viewing habits can be stored in a user data store 26 and used by the content provider back office processing unit 16 to construct user attributes that provide input to decisions on which ads to show via DAI. The invention described in EP 3657804 enables selected adverts, which may be triggered for viewing by a user, to be downloaded to a user's client device significantly in advance of an ad break so that when the triggering sequence for DAI commences, the ad is already on a user's device and the triggering simply triggers playback from that user's device.



Infringement

13. Section 60 of the Patents Act governs what constitutes infringement of a patent:
- (1) *Subject to the provision of this section, a person infringes a patent for an invention if, but only if, while the patent is in force, he does any of the following things in the United Kingdom in relation to the invention without the consent of the proprietor of the patent, that is to say -*
- (a) *where the invention is a product, he makes, disposes of, offers to dispose of, uses or imports the product or keeps it whether for disposal or otherwise;*
- (b) *where the invention is a process, he uses the process or he offers it for use in the United Kingdom when he knows, or it is obvious to a reasonable person in the circumstances, that its use there without the consent of the proprietor would be an infringement of the patent;*
- (c) *where the invention is a process, he disposes of, offers to dispose of, uses or imports any product obtained directly by means of that process or keeps any such product whether for disposal or otherwise.*
14. In the Supreme Court in *Actavis v Eli Lilly*¹, Lord Neuberger stated that the problem of infringement is best approached by addressing two issues, each of which is to be considered through the eyes of the notional addressee of the patent in suit, i.e. the person skilled in the relevant art. Those issues are:
- (i) *does the variant infringe any of the claims as a matter of normal interpretation; and, if not,*
- (ii) *does the variant nonetheless infringe because it varies from the invention in a way or ways which is or are immaterial?*

15. If the answer is “yes”, there is infringement; otherwise there is not.

Claim construction

16. Before I can determine whether the patent is infringed by the product, I must first construe the claims. This means interpreting the claims in light of the description and drawings as instructed by section 125(1) of the Patents Act. In doing so, I must interpret the claims in context through the eyes of the person skilled in the art. Ultimately, the question is what the person skilled in the art would have understood the patentee to be using the language of the claims to mean. This approach has been confirmed in the recent decisions of the High Court in *Mylan v Yeda*² and the Court of Appeal in *Actavis v ICOS*³.
17. Section 125 of the Act states that:

- (1) *For the purposes of this Act an invention for a patent for which an application has been made or for which a patent has been granted shall, unless the context otherwise requires, be taken to be that specified in a claim of the specification of the application or patent, as the case may be, as interpreted by the description*

¹ *Actavis UK Limited and Others v Eli Lilly and Company* [2017] UKSC 48

² *Generics UK Ltd (t/a Mylan) v Yeda Research and Dev. Co. Ltd & Anor* [2017] EWHC 2629 (Pat)

³ *Actavis Group & Ors v ICOS & Eli Lilly & Co.* [2017] EWCA Civ 1671

and any drawings contained in that specification, and the extent of the protection conferred by a patent or application for a patent shall be determined accordingly.

18. The request provides no specific definition of the person skilled in the art. However, during pre-grant prosecution of the patent application, the examiner and patent attorney acting on behalf of the patent proprietor agreed that the person skilled in the art would be an audio/visual equipment design engineer specialising in personal video recorders that interface with 'on demand' AV digital broadcasts. This definition seems reasonable to me.
19. Similarly, neither the requester nor observer has argued any particular interpretation of the claims. However, it is agreed that the key features of the main claims are:

Claim 1:

“private data storage means arranged to receive from the viewer and to store a personal profile of the viewer; and

a firewall arranged to prevent external access to stored personal data.”

Claim 6:

“each viewer storing a personal profile in their PVR behind a firewall which is arranged to prevent external access to data stored in the PVR;”

20. I note that, whilst the claims use the different terms “*private data*”, “*personal profile*” and “*personal data*”, the skilled person would consider that, in context, these terms essentially refer to the same thing. The description refers to this information as including “the number of adults and of children in the household and their ages, their interests, their ethnicity, the language they normally speak, and other sensitive details” (page 10 lines 4 to 8).
21. The key features identified above have been presented as the inventive concept of the patent claims, both during pre-grant prosecution of the patent application and in this request. Whilst the skilled person would be familiar with use of a firewall to prevent external access to data stored on a device, in prior art systems personal profile data has been provided to central servers and the like. Thus, the invention provides a means of protecting privacy, by keeping this personal profile data stored locally on a device behind a firewall, whilst still enabling targeted adverts in a digital video recording system.

Does YouView TV infringe the patent as a matter of normal interpretation?

22. The requester states that all YouView set top boxes require the viewer to enter personal data, such as home postcode. The requester then suggests that the only way that personal information can be protected within a set top box is by means of private data storage holding personal profile data behind a firewall. The two pieces of academic work relating to protection of sensitive personal data, which accompanied the request, are presented as proof to support the requester’s conclusion that the YouView TV system must fall within the scope of the claims of the patent for its use to be lawful under the GDPR.

23. The observations filed on behalf of YouView TV Ltd. indicate that anything that might be considered a personal profile of the viewer is stored server-side of the YouView system, not client-side on a PVR as required by claims 1 and 6 of the patent. In the YouView system, each PVR is identified by an identifier stored on it and the identifier includes no personal information; it is effectively a number.
24. Observations in reply repeat the allegation that, if the YouView system falls outside the scope of the claims of the patent, then its use is illegal under the GDPR. The further evidence submitted with the observations in reply attempt to support this conclusion regarding data protection.
25. I note that YouView TV Ltd's European Patent, EP 3657804, does not comment extensively on anything that could be understood to represent personal profile data. However, as discussed in paragraph 12 above and illustrated in the accompanying figure, information on a user's viewing habits, which may be used for targeted advertisements, is stored in the "user data store". This is clearly part of the YouView system, i.e. server-side, quite separate from the illustrated "Client Device".
26. The requester also highlights that the European Search Report for EP 3657804 cites a priority document for the patent, namely GB 2491093, and thus concludes that the priority document and consequently the patent affect all 14 claims of EP 3657804. However, I note that GB2491093 was cited as an "A" category document, which presents technological background rather than a disclosure that affects the novelty or inventiveness of EP 3657804.
27. Therefore, based on the evidence before me, I consider that a YouView box does not comprise "*private data storage means... to store a personal profile of the viewer*". As such, I am of the opinion that the YouView system as exemplified in EP 3657804 does not infringe claim 1, claim 3 or claim 6 of the patent as a matter of normal interpretation in accordance with section 60(1)(a) of the Act.

Does the product infringe the patent because it varies in an immaterial way?

28. In *Actavis v Eli Lilly*⁴, the Court provided a reformulation of the three questions in *Improver*⁴ to provide assistance in determining whether a variant infringes. These reformulated questions are:
 - (i) *Notwithstanding that it is not within the literal meaning of the relevant claim(s) of the patent, does the variant achieve substantially the same result in substantially the same way as the invention, i.e. the inventive concept revealed by the patent?*
 - (ii) *Would it be obvious to the person skilled in the art, reading the patent at the priority date, but knowing the variant achieves substantially the same result as the invention, that it does so substantially the same way as the invention?*
 - (iii) *Would such a reader of the patent have concluded that the patentee nonetheless intended that strict compliance with the literal meaning of the relevant claim(s) of the patent was an essential requirement of the invention?*

⁴ *Improver Corporation v Remington Consumer Products Ltd* [1990] FSR 181

29. To establish infringement in a case where there is no literal infringement, the answer to the first two questions would have to be “yes” and the answer to the third question would have to be “no”.
30. On the one hand, it could reasonably be argued that the YouView system does not achieve the same result as the patent given that the requester has argued extensively that only a system as outlined in the patent claims provides a means of protecting privacy, by keeping personal profile data stored locally on a device behind a firewall, whilst still enabling targeted adverts in a digital video recording system. It is the local storage of personal profile data on a device that is fundamental to the inventive concept of the patent. However, on the other hand, even if it was argued that the YouView system does achieve substantially the same result as the patent, i.e. providing targeted advertisements to viewers based on something akin to personal profile data, then I would say that this result is not achieved in substantially the same way. In the patent, headers associated with each advert stored in a first storage area 52 of the PVR allow adverts to be selected by the PVR 30 for supply to the television 40, which are targeted on personal profiles which match at least one profile stored in the PVR. However, in the YouView system exemplified in EP 3657804, Dynamic Advert Insertion (DAI) decisions are made by an Ad Decision Unit 12 of the YouView system – N.B. these decisions are not made by the YouView set top box. Hence, in my view, the answer to question (i) above is “no”. Necessarily, it follows that the answer to question (ii) would also be “no” since a person skilled in the art would not consider the YouView system to be achieving the result in substantially the same way.
31. Although it is not necessary to consider the third question, for completeness I opine that the reader of the patent would conclude that strict compliance with the literal meaning of both claim 1 and claim 6 of the patent was essential to the invention – namely, that “*personal profile*” data is stored “*in their PVR behind a firewall*” to set it apart from the prior art. So, in my opinion, the answer to the third question would be “yes”.
32. Therefore, in my opinion, the YouView system exemplified in EP 3657804 does not vary from the patent in a way that is immaterial.

Opinion

33. It is my opinion that the YouView system, outlined in EP 3657804, does not infringe the patent, GB 2490802 B.

Application for review

34. Under section 74B and rule 98, the proprietor may, within three months of the date of issue of this opinion, apply to the comptroller for a review of the opinion.

Dan Hickery
Examiner

NOTE

This opinion is not based on the outcome of fully litigated proceedings. Rather, it is based on whatever material the persons requesting the opinion and filing observations have chosen to put before the Office.