

OPINION UNDER SECTION 74A

Patent	GB2357679
Proprietor(s)	D4T4 Solutions Limited
Exclusive Licensee	
Requester	UserReplay Limited
Observer(s)	D4T4 Solutions Limited
Date Opinion issued	11 July 2019

The request

1. The comptroller has been requested to issue an opinion as to whether GB2357679, the Patent, is valid in the light of two prior art documents WO00/03323 and US5809250. This request, filed by Hepworth Browne Limited on behalf of UserReplay Limited, was followed by a further request on a further divisional application GB2357680, for an opinion which was given the number 08/19. Both cases are divisionals from GB2356783.
2. Cleveland Scott York have provided observations on behalf of D4T4 Solutions Limited, and that prompted observations in reply to be filed by Hepworth Browne for UserReplay Limited. I note that those observations included a copy of US2017/0134248, a document published well after the relevant dates for this application, and I shall not need to consider this document.

The Patent

3. The Patent was filed on 14 March 2000, as a divisional application and granted on 15 January 2002. The Patent relates to a way of monitoring user interaction and providing play back, by redisplaying the pages and user interaction with those pages. This is achieved by recording activities including a log of the pointing device (such as the mouse cursor) position on a page. In practice, that is for example a way of showing how a user interacts with a webpage. This information might be used to help design a webpage by looking at the time that it takes for someone to complete a transaction, and where they might be expecting to find interaction points, or where adverts might be placed.

Claim construction

4. There are two independent claims, claims 1 and 4 which relate to method and apparatus for the same invention and read:

*1. A method for monitoring user interactions with a service provided over a network to a plurality of end user communications units comprising the steps of:
monitoring and recording activities instigated by at least one user when using the service by interacting with one or more electronic page displayed in a browser on a respective communications unit, the recorded activities including a log of pointing device position on the or each page; and playing back activities recorded in the above step, wherein the playing back step includes redisplaying the electronic pages originally displayed and redisplaying user interaction therewith.*

4. Apparatus for monitoring user interactions with a service provided over a network to a plurality of end user communications units comprising means for monitoring and recording activities instigated by at is least one user when using the service by interacting with one or more electronic page displayed in a browser on a respective communications unit, the recorded activities including a log of pointing device position on the or each page; and means for playing back the recorded activities by redisplaying the electronic pages originally displayed and redisplaying user interaction therewith.

5. In their observations, D4T4 Solutions Limited emphasise the importance of understanding what the claim requires in the monitoring step. But there does not appear to be any particular concern in the request, observations or observations in reply that there is any difficulty in construing the claim in the light of the description and drawings as instructed by Section 125(1). 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 *Generics UK Ltd (t/a Mylan) v Yeda Research and Development Co. Ltd & Anor* [2017] EWHC 2629 (Pat) and the Court of Appeal in *Actavis Group & Ors v ICOS Corp & Eli Lilly & Co.* [2017] EWCA Civ 1671.
6. In this case, UserReplay in their observations in reply suggest that the skilled person should be taken to be a team including a software systems analyst and a commercial manager of a web-based business. Quite apart from the question of whether using a team complicates the question of what the skilled person might know, or who might be expected to do what, it is not completely clear to me that the role of a business manager would be in this team. D4T4 Solutions Limited suggest that the skilled person should be taken as an engineer involved in designing systems for the monitoring or web services. A suggestion that I agree appears appropriate.
7. So, what does the claim require, it requires a step of monitoring and recording activities, to create a log of pointing device position on a page. That log can then be used to replay how a user interacted with that page. It is worth noting that the log is defined in the claim as being of the pointing device position. However, there seem to be two different interpretations taken by the requester and observer, as to whether the cursor position might be inferred from interaction, such as from selected interaction with a button causing other action, such as network traffic involved in loading an advert selected on a page. In their observations, D4T4 Solutions Limited,

suggest that this difference makes a significant difference to the functionality for example when looking at dynamic webpages, sourcing content from multiple sources. D4T4 Solutions Limited contend that this in part flows from monitoring being carried out at the communication unit(s) [the client/user device], although the claim is silent on where and what carries out the monitoring step.

8. So, what is said in the description about the envisaged embodiments in the Patent? D4T4 Solutions Limited draw my attention to page 20 of the Patent (actually page 21) where mouse position is listed alongside items such as field selection, rollovers, and user input. The mouse position is described as one option, but for example on page 8, this is an option that might be omitted (“any one of the following...”). Of course, that is consistent with other pointer inputs being used, but the claim also requires a step of logging the pointer position. It is worth noting of course that for example on page 14, the Patent suggests that a variety of data sources can be used, actions within the user’s browser, network delivery of data to the user and from servers hosting webpages. That is of course true in the wider sense; but it does not explicitly link logging of pointer position to the data that is collected from each of those sources.
9. Rather when it comes to the detail it is only on the last two pages of the description, where the use of the position monitoring of cursor/mouse position is described. This the Patent suggests can be used to establish that users are struggling to find the “submit” button, where it is located elsewhere. That sort of picture cannot I believe be inferred from, for example, a time log of when an item is clicked, as it requires tracking of where the user looked using the cursor. Having read the description, I have not located any other passages that suggest inferring of the cursor location from say a simple time log.
10. I therefore conclude that the log of pointing device position would be understood by the reader to be a direct recordal of mouse or other input movements and/or recordal of the cursor movement within the display environment. I do not believe that a more indirect inferral of what a user might have done, which would result in say the web browser next retrieving an advert, provides the same functionality, and do not see support in the Patent for this sort of indirect process having been envisaged. Rather, where there are references to other data, I believe that this will be in addition to recordal of the pointer position.

The Prior Art

11. The request notes two pieces of prior art. The first, WO00/03323 (Wenig), relates to a method of auditing network applications, where an auditing detection filter detects and stores each request from the client and response from the server. This information can be used to visually recreate a user session and analyse the events that occurred in it. The requester provides a translation of this document, and there has been no suggestion in the observations that this translation is incorrect.
12. The second, US5809250 (Kisor), relates to a method of using a session file to provide protocol calls to a user’s local browser to replay a recorded browsing session as edited or annotated.

13. The requester provides a mapping of different parts of both documents onto the claims. It therefore suggests that they lack novelty and/or inventive step. In the observations D4T4 Solutions Limited set out a key point of disagreement with that conclusion, based on the question of whether a system that looks at network traffic rather than logging interaction with the page provides the functionality of the invention described in the Patent. Specifically, D4T4 Solutions Limited contend that the prior art does not provide a pointing device position log. There does not appear to be disagreement between parties over the other parts of claim 1 (or its equivalent apparatus claim 4.)

14. UserReplay Limited in the request identify page 1 line 36 to page 2 line 14 of the translation of Wenig which reads:

A user session in this sense is not always the entire activity between a log-on and a log-off, but may also be a screen display that changes, depending on the activity of the client or user and the current request. Such a request may also be an event such as the movement of a cursor by the user. If the cursor passes certain screen fields, e.g. a banner, an event is triggered.

15. There is a disagreement over the interpretation of this passage, but I think it is also worth noting what is said in the next paragraph, that, visual information such as *“which screen areas the user has covered with the mouse cursor”* is stored and *“the mouse cursor movement of the user is analysed”*. That paragraph suggests that *“preferably, only those data are stored with which the user’s mouse movement can be traced....in the subsequent analysis.”*

16. D4T4 Solutions Limited draw attention to page 4 lines 12-13, where it is stated that the user session includes client requests. D4T4 Solutions Limited use this to suggest that this is an exclusive list, and this is all that makes up a user session. There are two further references on page 5 lines 21- and page 6 lines 19-20 which provide similar support for the user session including requests. D4T4 Solutions Limited conclusion is therefore that the only disclosure is of indirect recordal of the mouse position.

17. The result is that I believe that Wenig does not anticipate the Patent.

18. The original request also raised the question of inventive step, although, the detail of that argument is only set out in the observations in reply. In those observations in reply, UserReplay Limited suggest that the skilled person having been taught from Wenig that mouse movement tracking is important to the designer would appreciate that that additional detail can be provided by the client providing tracking and reporting of the cursor position. D4T4 Solutions Limited in their observations assert correctly that I have not been provided with evidence on what the common general knowledge might have been at the time of filing, and the document that they provide from 2017 similarly does not provide any insight.

19. To determine whether an invention defined in a particular claim is inventive over the prior art, I will rely on the principles established in *Pozzoli SPA v BDMO SA* [2007] EWCA Civ 588:

(1)(a) Identify the notional “person skilled in the art”;

- (1)(b) Identify the relevant common general knowledge of that person;*
- (2) Identify the inventive concept of the claim in question or if that cannot readily be done, construe it;*
- (3) Identify what, if any, differences exist between the matter cited as forming part of the “state of the art” and the inventive concept of the claim or the claim as construed;*
- (4) Viewed without any knowledge of the alleged invention as claimed, determine whether those differences constitute steps which would have been obvious to the person skilled in the art.*

20. As I have noted above, the skilled person has been taken as an engineer involved in designing systems for the monitoring or web services.
21. The difference between Wenig and the claimed invention is whether a recordal of mouse position can be made at the device. Whilst UserReplay might argue that this is minimally different (or trivial) that alone is not enough to determine the question, I must try to work out whether the difference is one that means the claim is not inventive, without using hindsight.
22. Ideally, I would at this point be able to turn to some document as evidence that cursor recordal for later replay for example in a computer test environment was well established by the date of filing. However, these are of course not fully litigated proceedings. Whilst the objective is to provide an opinion, without that clear picture on whether this is part of the common general knowledge, there is a limit on how far I can take such a line of argument. I must therefore conclude based on the evidence provided in the request that Wenig does not render claims 1 and 4 obvious.
23. I turn then to the Kisor document, where again the question of how cursor movement is recorded is the centre of attention. Here UserReplay Limited focus on column 2 lines 23-27, where clicks are recorded as an event alongside the screen position of a cursor, column 8 lines 42-44 which relates to the playback of text, graphics, video; and column 9 lines 35-39 which relate to scrolling of the webpage. In my view, it is only the first of these where there is a clear linkage to the mouse position. Even this reference is not clearly linked to the replay function, as this falls within a section defining terminology, so the linkage of this event to replay of a session is not explicit.
24. D4T4 Solutions Limited therefore assert that there is no disclosure of using the mouse position as part of an interaction, nor of replay of that interaction. In their observations in reply, UserReplay Limited also highlight the section in column 4, that terms “such as processing, computing, calculating... refer to the action and processes of a computer system that manipulates and transforms data”, as being support for the mouse movement being part of that. I think that it is too much for such a generalised paragraph to tell us much about the detail, and I do not therefore think that this passage adds real disclosure to the passages that UserReplay Limited highlighted in their request.
25. UserReplay Limited also point to the passages explaining the session file 170, shown in figure 2. Whilst that text describes it as providing all the information necessary to replay the browsing session (column 4 lines 52-53), what is shown in the figure is a record of which URLs were accessed at what time. That will certainly replay the pages browsed, but there is, in my view no clear disclosure that a direct

recordal of mouse position is included in that. Whilst, it might be consistent with such a record, I do not see disclosure in Kisor that points the skilled person in that direction.

26. I do not therefore think that the skilled person when reading Kisor takes the same importance out of cursor position; the reference in column 2 is only a general one. I am not therefore convinced that the Kisor document anticipates the claimed invention in the Patent, nor does it seem to me to provide a basis for an inventive step objection.

Opinion

27. It is therefore my view that the Patent, GB2357679, is novel and inventive in relation to both WO00/003323 and US5809250.

Application for review

28. 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.

Robert Shorthouse
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.