



PATENTS ACT 1977

APPLICANT	Corethree Ltd
ISSUE	Whether patent applications GB1801081.9, GB1804424.8 and GB1808466.5 comply with section 1(2) and s76(2)
HEARING OFFICER	Peter Mason

DECISION

Introduction

- 1 This decision concerns the question of whether the inventions set out in patent applications GB1801081.9, GB1804424.8 and GB1808466.5, in the name of Corethree Ltd relates to excluded matter, whether they are estopped by record, by virtue of hearing decision BL O/206/18 and whether filing of these applications was an abuse of process.
- 2 Application GB1801081.9 entitled "*Digital ticketing system including a server and multiple mobile smartphone computing devices*" was filed at the Intellectual Property Office on 23 January 2018 as a divisional of application GB1403069.6. Application GB1804424.8 was filed on 23 March 2018 as a divisional of GB1801081.9 and GB1808466.5 was filed on 23 May 2018 as a divisional of GB1804424.8.
- 3 The parent application GB1403069.6 and an earlier divisional application GB1701773.2 was determined as result of the aforementioned hearing BL O/206/18 as being are excluded from patentability under sections 1(2)(c) and 1(2)(d) of The Patents Act 1977 (The Act) as a business method as such, a computer program as such and a presentation of information as such and therefore refused under section 18(3).

The inventions

- 4 The inventions of the three applications relate to the provision of electronic tickets presented to a user on a mobile computing device or smart phone. The tickets comprise a digital watermark that is animated to signify information to the user.

GB1801081.9

At the time of filing of GB1801081.9, the decision on the parent application had not been issued. The application qualified for combined search and examination (CSE), the examiner initially deferred the search instead issued an examination report, reporting that the application was excluded under sections 1(2)(c) and 1(2)(d) as being a presentation of information, a method of doing business and a computer program. The report was issued, dated 15 February 2018. The Applicant responded with inter alia an amended claim set dated 7 March 2018. The decision on the parent application GB1403069.6 was issued on 29 March 2018. In light of this decision the examiner issued a report stating that the substance and contribution of the divisional application were the same as the parent, that no argument that had not already been considered had been submitted and as such the invention was excluded. The Applicant filed a further claim set dated 10 May 2018. It was at this point that the examiner issued a report objecting to estoppel by record. Following further argument by the Applicant the Examiner issued another report dated 22 June 2018 reiterating the estoppel by record objection and suggesting a further objection of abuse of process, in so far as filing the divisional application was an attempt to circumnavigate the hearing decision on the parent and to have 'another bite of the cherry'. A hearing was offered initially on the issue of estoppel by record and abuse of process.

GB1804424.8

- 5 GB1804424.8 was filed on 23 March 2018 as a divisional of GB1801081.9 qualifying for combined search and examination. The examiner again deferred issuing a search report and raised an excluded matter objection noting that the claims as filed were equivalent to an auxiliary claim set already decided upon and refused at the earlier hearing. The applicant responded and filed a new set of claims dated 15 May 2018. The examiner issued a further examination report dated 30 May 2018 raising an estoppel by record objection as a result of the earlier hearing, stating:

'The present claims were a possible amendment to either of those cases and thus the hearing decision found them to be excluded'

The applicant filed further argument but the examiner maintained his objection in an examination report dated 22 June 2018 and further suggested an abuse of process identical to that raised against GB1801081.9, similarly a hearing was offered on these issues.

GB1808466.5

GB1808466.5 was filed on 23 May 2018 as a divisional of GB1804424.8 qualifying for combined search and examination. The examiner deferred search of the application and issued an examination report dated 2 July 2018 objecting to estoppel by record and again offering a hearing.

- 6 It was agreed that the three applications should be heard at the same time.
- 7 The issue came before me at a hearing via video conference at the Intellectual Property Office on 23 September 2018. The applicant was represented by Dr. David Bottomly of Origin Ltd. Also present was my assistant Mr. David Hotchkiss.

Further Submissions

- 8 Following the hearing, in light of the unextended compliance date being passed and for expediency in future processing of the application should I allow it to continue, the Applicant was invited to file further submissions and or request a continuation of the hearing on the outstanding excluded matter objections. Rather than make submissions on the objection raised, the Applicant chose to file amended claim sets dated 29 November 2018.

Allowability of the amended claims

- 9 The filing of new claims introduces further questions that I must first decide. Are the new claim sets permissible under section 19(1) and rule 31 and if yes, the examiner has reported that they contain added subject matter.

Amendment and added subject matter

The Law

- 10 The relevant provision of the Act in relation to amendments is section 19(1) which reads:

19(1) At any time before a patent is granted in pursuance of an application the applicant may, in accordance with s76 below, amend the application of his own volition.

And s76 states:

76(2) No amendment of an application for a patent shall be allowed under section 15A(6), 18(3) or 19(1) if it results in the application disclosing matter extending beyond that disclosed in the application as filed.

Rule 31 states:

Amendment of application before grant

31.—(1) A request to amend an application for a patent under section 19(1) must be made in writing.

(2) The conditions prescribed under section 19(1) are as follows.

(3) Subject to rule 66A the applicant may amend his application only within the period beginning with the date on which the applicant is informed of the examiner's report under

section 17(5) and ending with the date on which the comptroller sends him the first substantive examination report.

(4) But after the end of this period, the applicant may—

(a) where the first substantive examination report states that his application complies with the requirements of the Act and these Rules, amend his application once before the end of the period of two months beginning immediately after the date on which that report was sent; or

(b) where the first substantive examination report states that his application does not comply with the requirements of the Act and these Rules—

(i) amend his application once at the same time as he makes his first observations on, or amendments to, his application under section 18(3), and

(ii) if the first substantive examination report is sent before preparations for the application's publication have been completed by the Patent Office, amend his application prior to any further amendment he may make under sub-paragraph (b)(i).

(5) However, the conditions in paragraphs (3) and (4) do not apply—

(a) where the comptroller consents to the amendment; or

(b) to an amendment of a request for the grant of a patent.

(6) Where the comptroller's consent is required, or the applicant wishes to amend the request for the grant of a patent, the applicant must include the reasons for the amendment.

- 11 This means that an amendment made to a patent application, whether of the applicant's own volition or in response to an examiner's objection, must not include any technical information about the invention which was not present in the originally filled application.
- 12 Guidance on the test to be applied can be found in *Bonzel and Schneider (Europe) AG v Intervention Ltd*¹, where Aldous J (as he then was) stated:

The decision as to whether there was an extension of disclosure must be made on a comparison of the two documents read through the eyes of a skilled addressee. The task of the Court is threefold:

a) To ascertain through the eyes of the skilled addressee what is disclosed, both explicitly and implicitly in the application.

b) To do the same in respect of the patent as granted.

c) To compare the two disclosures and decide whether any subject matter relevant to the invention has been added whether by deletion or addition. The comparison is strict in the sense that subject matter will be added unless such matter is clearly and unambiguously disclosed in the application either explicitly or implicitly.

- 13 A further summary was provided in *Richardson-Vicks Inc's Patent*² where Jacob J (as he then was) stated:

The test of added matter is whether a skilled man would, upon looking at the amended specification, learn anything about the invention which he could not learn from the unamended specification.

Analysis

- 14 Whereas the applicant has exhausted his opportunity to file voluntary amendments under rule 31, I am willing to accept the new claims in an attempt to further the processing of this application. However the examiner has identified subject matter that would appear to extend the disclosure of all three applications beyond that originally filed. The potential added subject matter identified is:

¹ *Bonzel and Schneider (Europe) AG v Intervention Ltd* [1991] RPC 553

² *Richardson-Vicks Inc's Patent* [1995] RPC 586

The stored digital ticket before activation when displayed on the screen not including an animated visual watermark.

- 15 This matter is present in claims 1 and 20 of GB1801081.9; claims 1, 25, 27 and 29 of GB1804424.8; and claims 1, 22 and 24 of GB1808466.5.
- 16 In the letter dated 29 November 2018, accompanying the claims, the applicant states that the basis for this amendment may be found on page 34, lines 13-14 and page 36, line 2.
- 17 Page 34, lines 13 – 14 disclose that the watermark is only displayed after “first access” (and lines 10 – 12 disclose that the watermark is not displayed after the ticket has expired).
- 18 Page 36, line 2 discloses that tickets which haven’t been activated will display a button marked “activate”.
- 19 Neither of these passages explicitly set out that if the user accesses an unactivated ticket and displays it, that the ticket will not include the watermark. I have also considered the rest of the application and can find no other disclosure of this feature. Further I cannot find any clear and unambiguous implicit disclosure of displaying an unactivated ticket without a watermark.
- 20 Turning to the Richardson-Vicks Inc’s Patent summary; the skilled person would learn that unactivated tickets are displayed without a watermark. Thus, the amendments therefore constitute added matter contrary to Section 76(2) and are not allowable.
- 21 The applicant was unable to find any saving amendment to the parent application heard previously (BL O/206/18), but has still continued to file divisionals and amended claims. I can see no reason to exercise any further discretion to file further amended claim sets as we do not appear to be progressing the processing of these applications. I will therefore base my decision as to the patentability of these applications on the current working copy of the claims reproduced in the annexe.

Excluded subject matter

The Law

- 22 The examiners raised objections under section 1(2) of the Act stating that the inventions are not patentable because they relate *inter-alia* to one or more categories of excluded matter. The most relevant provisions of this section of the Act are shown in bold below:

1(2) It is hereby declared that the following (amongst other things) are not inventions for the purpose of the Act, that is to say, anything which consists of –

(a) ... ;

(b) ... ;

(c) a scheme, rule, or method for performing a mental act, playing a game or **doing business**, or a **program for a computer**;

(d) **the presentation of information**;

but the foregoing provisions shall prevent anything from being treated as an invention for the purposes of the Act only to the extent that a patent or application for a patent relates to that thing as such.

These provisions are designated in Section 130(7) as being so framed as to have, as nearly as practicable, the same effect as Article 52 of the European Patent Convention, to which they correspond. I must therefore also have regard to the decisions of the European Patent Office Boards of Appeal that have been issued under this Article in deciding whether the present invention is patentable although I am not bound to follow them. I am bound to follow the decisions of the UK Courts however.

23 There is a large amount of case law in relation to the provisions of section 1(2). The most significant recent judgments of the Court of Appeal on the matter are *Aerotel/Macrossan*³ and *Symbian Ltd's Application*⁴. Following the guidance in *Symbian* I will use the four-step approach explained at paragraphs 40-48 of *Aerotel* and ensure in my consideration of steps (3) and (4) that I determine whether the invention makes a technical contribution. The steps are :

(1) *Properly construe the claim;*

(2) *Identify the actual contribution;*

(3) *Ask whether it falls solely within the excluded subject matter;*

(4) *Check whether the actual or alleged contribution is actually technical in nature.*

24 The Court said in *Symbian* (see paragraphs 8-15) that the structured four-step approach to the question in *Aerotel* was not a new departure in domestic law and that it remained bound by its previous decisions, particularly *Merrill Lynch*⁵. The *Aerotel* test is intended to be equivalent to the prior case law test of "technical contribution".

25 When considering the computer programme exclusion, it can be helpful to consider the 'signposts' set out in paragraph 40 of *AT&T/CVON*⁶ which provide guidelines when considering whether a computer program makes a relevant technical contribution beyond the exclusion. The fourth signpost was subsequently reworded by the court of appeal in paragraphs 50-51 of *HTC v Apple*⁷ following *Gemstar*⁸; The five reworded signposts are as follows:

³ *Aerotel Ltd v Telco Holdings Ltd and Macrossan's Application* [2006] EWCA Civ 1371; [2007]

⁴ *Symbian Ltd v Comptroller-General of Patents* [2009] RPC 1

⁵ *Merrill Lynch's Application* [1989] RPC 561

⁶ *AT&T Knowledge Ventures/CVON Innovations v Comptroller General of Patents* [2009] EWHC 343 (Pat)

⁷ *HTC v Apple* [2013] EWCA Civ 451

⁸ *Gemstar-TV Guide International Inc v Virgin Media Ltd* [2010] RPC 10

- (i) *whether the claimed technical effect has a technical effect on a process which is carried on outside the computer;*
- (ii) *whether the claimed technical effect operates at the level of the architecture of the computer; that is to say whether the effect is produced irrespective of the data being processed or the applications being run;*
- (iii) *whether the claimed technical effect results in the computer being made to operate in a new way;*
- (iv) *whether the program makes the computer a better computer in the sense of running more efficiently and effectively as a computer;*
- (v) *whether the perceived problem is overcome by the claimed invention as opposed to merely being circumvented.*

Analysis

- 26 I will consider each application turn beginning with GB1801081.9.
- (1) Properly construe the Claims.
- 27 The claims are generally straightforward to construe given the description, and require no unusual or special meaning to be applied to any of the terms used, though I will make the following observation.
- 28 The claims refer to an animated watermark or an animated image, the animated nature of these marks makes them implicitly 'visible' marks as I can see no other way that they could be determined to be animated other than by a user 'seeing' them.
- 29 Claim 1 is to a smartphone (which is just a small computer with an inbuilt screen and communication capabilities) storing a digital ticket and when the digital ticket is displayed on the inbuilt screen it includes an animated visual watermark.
- 30 Claim 22 is to a computer program suitable to be executed on a smartphone and the program will cause the smartphone it is executing on to display a digital ticket on the screen and include an animated visual watermark in the display of the ticket.
- (2) Identify the actual contribution.
- 31 Paragraph 43 of the Aerotel/Macrossan judgment explains what is meant by the contribution and sets out that it corresponds to what the invention has added to human knowledge, the problems it solves and the advantages it offers and in doing so one should consider the substance of the invention and not the form of the claim.
- 32 The examiner has asserted what he considers to be the common general knowledge as a starting point for considering the contribution of the invention, as being:
- “the use of a smartphone to display a digital ticket with static visual watermarks. Also within the common general knowledge is the ability to copy data (of any kind) stored on a smartphone and transmit that data (such as by*

e-mail) to any other computing device and smartphones can do this (copy and transmit the data) with static digital tickets and videos without recourse to screen grabbing.”

33 He then went on to identify the contribution as:

“a computer program which will cause a mobile computer with an integrated screen to display a digital ticket including an animated visual watermark. It can be readily seen that this difference over the common general knowledge is that the watermark is animated. I consider that the advantage of animating the image is that it provides for greater flexibility and the capability to provide greater entertainment for the viewer of the ticket.”

34 Throughout the prosecuting of these applications (and at the earlier hearing on the parent application) Dr. Bottomley has asserted that the contribution lies in the field of security, and that the provision of an animated watermark provides enhanced security over the equivalent static image. Dr. Bottomley identified the contribution as being:

“a mobile smartphone computing device including a stored digital ticket, the device configured to display the stored digital ticket, the stored digital ticket when displayed on the screen including an animated visual watermark, in which the animated digital water mark provides a secure digital ticket. This has the advantage that the digital ticket can’t be forged by a simple static image grab of the ticket.”

35 There was a full discussion of the alleged ‘security’ aspect of watermarks in the earlier hearing and although I acknowledge the current claim sets are different, the content of the applications is the same, and as such I can see no compelling reason to come to a different view to my colleague Dr. Davies in BL O/206/18, that:

“The description does not anywhere discuss specifically the issue of security or of preventing forgery of digital tickets.”⁹

36 Further the claims of the current application are silent on both security and validity. I do not intend to re-visit this discussion. It is my view that the contribution is:

A mobile smartphone (or mobile computer) computing device including a stored digital ticket, the device configured to display the stored digital ticket, the stored digital ticket when displayed on the screen including an animated visual watermark.

37 (3) Does it fall solely within the excluded matter

38 It is clear that the delivery of digital tickets to a mobile computing device is a process carried out by a computer program, but this fact by itself does not mean the invention is necessarily excluded as a computer program as such. What matters is the process the program will cause a computer to perform, because this is the substance of the invention, following *Astron Clinica Ltd & Ors v The Comptroller General of Patents*,

⁹ BLO/206/18 para. 16.

*Designs and Trade Marks*¹⁰. The process in this case causes the system to deliver a digital ticket to a mobile computing device and display it on the screen of the device with an animated watermark or animated image.

Business method

- 39 The business method exclusion was discussed in *Merrill Lynch's Application*¹¹, in which Fox LJ concluded that an improved method of doing business is still a method of doing business:

The fact that the method of doing business may be an improvement on previous methods of doing business does not seem to me to be material. The prohibition in section 1(2)(c) is generic; qualitative considerations do not enter into the matter. The section draws no distinction between the method by which the mode of doing business is achieved. If what is produced in the end is itself an item excluded from patentability by section 1(2), the matter can go no further.

- 40 In *Halliburton Energy Services Inc's Applications*¹², HHJ Birss QC at paragraph 35 noted that the use of a computer to implement a better business method did not confer patentability:

The business method cases can be tricky to analyse by just asking whether the invention has a technical effect or makes a technical contribution. The reason is that computers are self evidently technical in nature. Thus when a business method is implemented on a computer, the patentee has a rich vein of arguments to deploy in seeking to contend that his invention gives rise to a technical effect or makes a technical contribution. For example the computer is said to be a faster, more efficient computerized book keeper than before and surely, says the patentee, that is a technical effect or technical advance. And so it is, in a way, but the law has resolutely sought to hold the line at excluding such things from patents.

- 41 The process of delivering a ticket to a customer is clearly a business method. The fact that the process is carried out using for example a network, a server, and mobile computing devices is therefore immaterial. The fact that the person checking the ticket must look at the device screen rather than, for example, a printed paper ticket, is immaterial, even if the animated watermark or animated image conveys some additional information. Any such improvement in the process of checking the ticket is merely an improved business method, and so is excluded from patentability.

Computer program

- 42 Turning to the question of whether the invention is a computer program as such, I will refer to the *AT&T* signposts.

¹⁰ *Astron Clinica Ltd & Ors v The Comptroller General of Patents, Designs and Trade Marks* [2008] RPC 14

¹¹ *Merrill Lynch's Application* [1989] RPC 561

¹² *Halliburton Energy Services Inc's Applications* [2012] RPC 129

- 43 With regard to the first signpost, and whether there is a technical effect outside the computer, Dr Bottomley asserted that increased security of a digital ticket having an animated watermark or animated image causes a technical effect outside the computer. Since I have not been convinced that security is part of the contribution, I do not agree that any technical effect is caused in this way.
- 44 The second, third, and fourth signposts relate to the fundamental workings of the computer itself. The present invention, relating to a system for the delivery of digital tickets to mobile computing devices, has no impact upon the computer itself in the manner required to fulfil these signposts.
- 45 The fifth signpost asks whether a technical problem is being solved by the claimed invention. The presentation of a ticket to a user is not a technical problem but a business one, and so this signpost is not fulfilled.
- 46 Since I have not found the contribution to meet any of the signposts, I find that the invention is excluded as a computer program as such.

Presentation of information

- 47 I consider the presentation of a ticket to a user is not a technical issue but a business one. The delivery of the digital ticket to the mobile computing device and the displaying of the ticket on the screen with an animated watermark or an animated image amounts to the presentation of information, I am of the view that the invention is excluded also as a presentation of information as such.

(4) Check whether the actual or alleged contribution is actually technical in nature.

- 48 I find that there is no relevant technical aspect to the invention.

GB1808466.5

(1) Properly construe the Claims.

- 49 As above there is similarly no difficulty in construing the claims.
- 50 Claim 1 is to a system including a central computer storing digital tickets which can be delivered to any of a plurality of smartphones via a network and when the smartphone displays a digital ticket received from the central computer on its screen the digital ticket includes an animated visual watermark.
- 51 Claim 23 is to a method for a smartphone to display a digital ticket whereby the smartphone requests and receives a digital ticket from a central computer and when the digital ticket is displayed on the screen of the smartphone the digital ticket includes an animated visual watermark.
- 52 Claim 25 is to a mobile smartphone which requests and receives a digital ticket from a central computer and when the application causes the digital ticket to be displayed on the screen the digital ticket includes an animated visual watermark.

(2) Identify the actual contribution.

53 I identify the contribution of GB1808466.5 as being identical to that of GB1801081.9. Whilst the claims differ in form I consider that they do not in substance.

(3) Does it fall solely within the excluded matter

54 As the contribution is identical I am of the view that the invention is excluded from patentability as a business method as such, a computer program as such and a presentation of information as such.

(4) Check whether the actual or alleged contribution is actually technical in nature.

55 I find that there is no relevant technical aspect to the invention.

GB1804424.8

(1) Properly construe the Claims.

56 Claim 1 is to a system including a server (a central computer) storing digital tickets which can be delivered to any of a plurality of smartphones via a network, upon request via an application, and when the smartphone displays, using the application, a digital ticket received from the central computer on its screen the digital ticket includes an animated visual watermark.

57 Claim 27 is to a method for a smartphone to display a digital ticket whereby an application requests and receives a digital ticket from a central computer and when the application displays the digital ticket on the screen of the smartphone the digital ticket includes an animated visual watermark.

58 Claim 29 is to a mobile smartphone which has an application which requests and receives a digital ticket from a central computer and when the application causes the digital ticket to be displayed on the screen the digital ticket includes an animated visual watermark.

59 Claim 31 is to a computer program which when executed on a smartphone causes the smartphone to request and receive a digital ticket from a central computer and when displaying the digital ticket to animate a visual watermark in the ticket on the screen on the smartphone.

(2) Identify the actual contribution.

60 I identify the contribution of GB1804424.8 as being identical to that of GB1801081.9. Again whilst the claims differ in form I consider that they do not in substance.

(3) Does it fall solely within the excluded matter

61 As the contribution is again identical to that of GB1801081.9 I am of the view that the invention is excluded from patentability as a business method as such, a computer program as such and a presentation of information as such.

(4) Check whether the actual or alleged contribution is actually technical in nature.

62 I find that there is no relevant technical aspect to the invention.

Other matters

63 In light of my findings above I will not consider further the other outstanding matters of estoppel by record or abuse of process.

Conclusion

64 I find that the inventions as claimed in GB1801081.9, GB1804424.8 and GB1808466.5 are excluded from patentability under sections 1(2)(c) and 1(2)(d) as a business method as such, a computer program as such, and a presentation of information as such.

65 I therefore refuse the applications under Section 18(3).

Appeal

66 Any appeal must be lodged within 28 days after the date of this decision.

PETER MASON

Deputy Director, acting for the Comptroller

Annexe

GB1801081.9

Independent claims, filed 10/05/2018

Claim 1:

A mobile smartphone computing device, the mobile smartphone computing device including a screen, the mobile smartphone computing device including a stored digital ticket, the mobile smartphone computing device configured to display the stored digital ticket on the screen, the stored digital ticket when displayed on the screen including an animated visual watermark.

Claim 22:

Computer program product, executable on a mobile smartphone computing device including a screen, the computer program product executable on the mobile smartphone computing device to:

- i) access a digital ticket stored on the mobile smartphone computing device;
- ii) display the digital ticket on the screen, and
- iii) animate a visual watermark in the digital ticket wherein the animated visual watermark is displayed on the screen.

Independent claims, filed 29/11/2018

Claim 1:

A mobile smartphone computing device, the mobile smartphone computing device including a ticketing application and a screen, the mobile smartphone computing device including a stored node including a stored digital ticket, the stored node including a unique ID, the stored node forming part of a hierarchically structured database, and the stored node addressable by the ticketing application using a textual path, wherein the stored digital ticket is activatable using the ticketing application, the ticketing application configured to display the stored digital ticket on the screen, the stored digital ticket when activated and displayed on the screen including an animated visual watermark, the stored digital ticket before activation when displayed on the screen not including an animated visual watermark.

Claim 20:

Computer program product, executable on a mobile smartphone computing device including a screen and a stored node including a stored digital ticket, the stored node including a unique ID, the stored node forming part of a hierarchically structured database, and the stored node addressable by the computer program product using

a textual path, the computer program product executable on the mobile smartphone computing device to:

- (i) access the stored digital ticket stored on the mobile smartphone computing device;
- (ii) receive an instruction to activate the stored digital ticket, and to activate the stored digital ticket;
- (iii) display the stored digital ticket on the screen;
- (iv) animate a visual watermark in the activated digital ticket wherein the animated visual watermark is displayed on the screen, and
- (v) display the stored digital ticket on the screen without an animated visual watermark, prior to activation of the stored digital ticket.

GB1804424.8

Independent Claims Filed 15/05/2018

Claim 1:

System including a server and multiple mobile smartphone computing devices, each mobile smartphone computing device including a respective screen, the multiple mobile smartphone computing devices each connectable to the server via a network, the server including a database storing content, the content deliverable to the mobile smartphone computing devices when in connection with the server via the network, the content including digital tickets, wherein each mobile smartphone computing device includes a respective digital ticketing application which is configured to request, to receive and to display a digital ticket on the respective screen, the digital ticket when displayed on the respective screen including an animated visual watermark.

Claim 27:

Method of displaying a digital ticket, the method comprising the steps of:

- i) a mobile smartphone computing device including a digital ticketing application executing the digital ticketing application to request and to receive a digital ticket from a server, wherein the mobile smartphone computing device is in connection with the server, the mobile smartphone computing device including a screen;
- ii) the mobile smartphone computing device executing the digital ticketing application to display the digital ticket on the screen, the digital ticket when displayed on the screen including an animated visual watermark.

Claim 29:

A mobile smartphone computing device, the mobile smartphone computing device connectable to a server via a network connection, the mobile smartphone computing device including a screen, the mobile smartphone computing device including a digital ticketing application, the digital ticketing application configured to request, to receive and to display a digital ticket on the screen, the digital ticket when displayed

on the screen including an animated visual watermark.

Claim 31:

Digital ticketing computer program product, executable on a mobile smartphone computing device to display a digital ticket, the digital ticketing computer program product executable on the mobile smartphone computing device to:

- i) request and receive a digital ticket from a server, wherein the mobile smartphone computing device is in connection with the server, the mobile smartphone computing device including a screen;
- ii) display the digital ticket on the screen, and
- iii) animate a visual watermark in the digital ticket wherein the animated visual watermark is displayed on the screen.

Independent claims filed filed 29/11/2018

Claim 1:

System including a server and multiple mobile smartphone computing devices, each mobile smartphone computing device including a respective screen, the multiple mobile smartphone computing devices each connectable to the server via a network, the server including a hierarchically structured database storing content, the content deliverable to the mobile smartphone computing devices when in connection with the server via the network, the content including nodes including digital tickets each node including a unique ID, each node forming part of the hierarchically structured database, wherein each mobile smartphone computing device includes a respective digital ticketing application which is configured to request, to receive and to display a node including a digital ticket on the respective screen, the node addressable by the ticketing application using a textual path, wherein the digital ticket of the node is activatable using the respective ticketing application, the digital ticket when activated and displayed on the respective screen including an animated visual watermark, the digital ticket before activation when displayed on the screen not including an animated visual watermark.

Claim 25

Method of displaying, a digital ticket, the method comprising the steps of:

- (i) a mobile smartphone computing device including a digital ticketing application executing the digital ticketing application to request and receive a node including a digital ticket from a server, and storing on the mobile computing device the node including the digital ticket, the node including a unique ID, the node forming part of a hierarchically structured database, wherein the mobile smartphone computing device is in connection with the server, the mobile smartphone computing device including a screen;
- (ii) the mobile smartphone computing device executing the digital ticketing application to receive an instruction to activate the digital ticket, and to activate the digital ticket, wherein the stored node is addressed using a textual path;

(iii) the mobile smartphone computing device displaying the digital ticket on the screen, the digital ticket when activated and displayed on the screen including an animated visual watermark, the digital ticket before activation when displayed on the screen not including an animated visual watermark.

Claim 27:

A mobile smartphone computing device, the mobile smartphone computing device connectable to a server via a network connection, the mobile smartphone computing device including a screen, the mobile smartphone computing device including a digital ticketing application, the digital ticketing application configured to request, to receive and to store a node including a digital ticket, the stored node including a unique ID, the stored node forming part of the hierarchically structured database, and the stored node addressable by the ticketing application using a textual path, wherein the digital ticket is activatable using the ticketing application, the ticketing application configured to display the digital ticket on the screen, the digital ticket when activated and displayed on the screen including an animated visual watermark, the digital ticket before activation when displayed on the screen not including an animated visual watermark.

Claim 29:

Digital ticketing computer program product, executable on a mobile smartphone computing device including a stored node including a digital ticket, the stored node including a unique ID, the stored node forming part of a hierarchically structured database and the stored node addressable by the computer program product using a textual path, the computer program product executable to display the digital ticket, the digital ticketing computer program product executable on the mobile smartphone computing device to:

- (i) request and receive a node including a digital ticket from a server, wherein the mobile smartphone computing device is in connection with the server, the mobile smartphone computing device including a screen;
- (ii) receive an instruction to activate the digital ticket, and to activate the digital ticket;
- (iii) display the digital ticket on the screen;
- (iv) animated visual watermark in the activated digital ticket wherein the animated visual watermark is displayed on the screen, and
- (v) display the digital ticket on the screen without an animated visual watermark, prior to activation of the digital ticket.

GB18084466.5

Independent claims filed 23/05/2018

Claim 1:

System including a server and a multiple smartphone mobile computer devices, each smartphone mobile computing device including a respective screen, the multiple smartphone mobile computing devices each connectable to the server via a network, the server including a database storing content, the content deliverable to the smartphone mobile computing devices when in connection with the server via the

network, the content including digital tickets, wherein each smartphone mobile computing device is configured to receive and to display a digital ticket on the respective screen, the digital ticket when displayed on the respective screen including an animated visual watermark.

Claim 23:

Method of displaying a digital ticket, the method comprising the steps of:

- i) a smartphone mobile computing device receiving a digital ticket from a server, wherein the smartphone mobile computing device is in connection with the server, the smartphone mobile computing device including a screen;
- ii) The smartphone mobile computing device displaying the digital ticket on the screen, the digital ticket when displayed on the screen including an animated visual watermark.

Claim 25:

A smartphone mobile computing device, the smartphone mobile computing device connectable to a sever via a network connection, the smartphone mobile computing device including a screen, the smartphone mobile computing device configured to receive and to display a digital ticket on the screen, the digital ticket when displayed on the screen including an animated visual watermark.

Independent claims filed filed 29/11/2018

Claim 1:

System including a server and multiple smartphone mobile computing devices, each smartphone mobile computing device including a respective screen, the multiple smartphone mobile computing devices each connectable to the server via network, the server including a hierarchically structured database storing content, the content deliverable to the smartphone mobile computing devices when in connection with the server via the network, the content including nodes including digital tickets, each node including a unique ID , each node forming part of the hierarchically structured database, wherein each smartphone mobile computing device is configured to receive and to display a node including a digital ticket on the respective screen, the node addressable by the ticketing application using a textual path, wherein the digital ticket of the node is activatable using the respective ticketing application, the digital ticket when activated and displayed on the respective screen including an animated visual watermark, the digital ticket before activation when displayed on the screen not including animated visual watermark.

Claim 22:

Method of displaying a digital ticket, the method comprising the steps of:

- (i) a smartphone mobile computing device, including a digital ticketing application, executing the digital ticketing application to receive a node including a digital ticket from a server, and storing on the smartphone mobile computing device the node

including the digital ticket, the node including a unique ID, the node forming part of a hierarchically structured database, wherein the smartphone mobile computing device is in connection with the server, the smartphone mobile computing device including a screen;

(ii) the smartphone mobile computing device executing the digital ticketing application to receive an instruction to activate the digital ticket, and to activate the digital ticket wherein the stored node is addressed using a textual path;

(iii) the smartphone mobile computing device displaying the digital ticket on the screen, the digital ticket when activated and displayed on the screen including an animated visual watermark, the digital ticket before activation when displayed on the screen not including an animated visual watermark.

Claim 24:

24. A smartphone mobile computing device, the smartphone mobile computing device connectable to a server via network connection, the smartphone mobile computing device including a screen, the smartphone mobile computing device including a digital ticketing application, the digital ticketing application configured to receive and to store a node including a digital ticket, the stored node including a unique ID, the stored node forming part of a hierarchically structured database, and the stored node addressable by the ticketing application using a textual path, wherein the digital ticket is activatable using the ticketing application, the ticketing application configured to display the digital ticket on the screen, the digital ticket when activated and displayed on the screen including an animated visual watermark, the digital ticket before activation when displayed on the screen not including an animated watermark.