Location of an article containing a search term in a hosted document

TECHNICAL FIELD OF INVENTION

[001] The following discloses arrangements for a computing device that can visually demarcate an article containing a search term in a hosted document and a method thereof.

BACKGROUND

[002] To quickly identify whether an electronic document contains phrases or words of interest to a reader, most documents come with tools that allow searching for such phrases or words. The search is conducted using a search term that is created from these phrases or words.

[003] Search of the text within the electronic document will lead to the exact location of the search term. The user will then have to identify whether the portion of the document in which the search term is located has content which the user is seeking to find. If the identified portion is indeed relevant to the user and it is important that the entire portion (i.e. the beginning till the end, within which the search term is contained) be copied for sharing or storage, this has to be performed using precise cursor selection of the relevant block of text and graphics, if present. This can be time consuming if there are several such identified portions for copying.

[004] Further, while text within document formats (such as PDF, Microsoft™ Word) is searchable, such text can be easily copied or extracted for unauthorised use. Even when there is authorised copying of the text, replication of the text may not retain its original layout. The loss of the original layout may result in the replicated text being presented in an alignment that may have less of a visual impact compared to the original layout.

[005] The following discloses computing devices and a method that addresses the above identified shortcomings of existing systems.

SUMMARY

[006] According to a first aspect of the invention, there is provided a method of locating an article containing a search term in a hosted document, the method comprising: processing the search term against all searchable content within the

hosted document to locate an article containing the search term, the article being one of a plurality of articles within the hosted document; and visually demarcating the entire article to distinguish the article from a remainder of the hosted document.

[007] According to a second aspect of the invention, there is provided a memory storing an application that when executed causes one or more processors to perform the method in accordance to the first aspect of the invention.

[008] According to a third aspect of the invention, there is provided a server containing the memory in accordance to the second aspect of the invention.

[009] According to a fourth aspect of the invention, there is provided a computing device for article location, the computing device comprising: at least one processor; and at least one memory including computer program code; the at least one memory and the computer program code configured to, with the at least one processor, cause the computing device at least to: process a search term against all searchable content within a hosted document to locate an article containing the search term, the article being one of a plurality of articles within the hosted document; and visually demarcate the entire article to distinguish the article from a remainder of the hosted document.

BRIEF DESCRIPTION OF THE DRAWINGS

[010] Embodiments of the invention will be better understood and readily apparent to one of ordinary skill in the art from the following written description, by way of example only, and in conjunction with the drawings, in which:

[011] Figure 1 shows a document that may be hosted in a computing device.

[012] Figure 2A shows a schematic of a computing device that can be used to host the document of Figure 1 and performs a search in accordance with the method shown in Figure 4.

[013] Figure 2B shows a schematic of the computing device of Figure 2A used to host a document and perform a search in accordance with the method shown in Figure 4.

[014] Figure 3 shows an exemplary architecture for realising the computing device shown in Figures 2A and 2B.

[015] Figure 4 shows a flow chart for a method that allows the visual demarcation of an article that contains a search term.

[016] Figure 5 shows additional steps which may be performed in a preferred implementation of the method shown in Figure 4.

[017] Figure 6 shows a process flow that occurs in one implementation of the method shown in Figure 5.

[018] Figure 7 depicts a block diagram embodying a network to which a server and client devices are connected.

DETAILED DESCRIPTION

[019] In the following description, various embodiments of the invention are described, by way of example only, with reference to the drawings, where like reference characters generally refer to the same parts throughout the different views.

[020] Figure 1 shows a document 100 that may be hosted in a computing device (not shown), such as a server terminal or a client device. The document 100 is thus in electronic format and Figure 1 shows the document 100 as it is accessed by such a computing device.

[021] The document 100 has content 106 such as text 102 and graphics 104, such as a logo. The content 106 is organised into one or more (or a plurality of) articles 108. For simplicity, only a portion of the content 106 and three of the several articles 108 are labelled. Each article 108 is configured to occupy a space with its own distinct or unique placement within document 100, so that each article 108 is identified to a processor of the server terminal by its distinct or unique placement, rather than the content of the article 108. For instance, in Figure 1, the two articles 108 are identified as a first article 108 placed in the second row of the first column of the document 100; a second article 108 placed in the fifth row of the first column of the document 100; and a third article 108 placed in the first row of the third column of the document 100. If two articles 108 have the same content, they are recognised to be different articles by the processor of the server terminal. The content of the article 108 may include any one or more of text 102 and graphics 104. For instance, the first article 108 and the second article 108 contain only text, while

the article 108 contains both graphics 104 (being the logo, "OrangeTee™") and text 102.

[022] Figure 2A shows a schematic of a computing device 210 that can be used to host the document 100 of Figure 1. The computing device may be a server or a client device. Use of the term 'server' herein may be understood to mean a single computing device or a plurality of interconnected computing devices which operate together to perform a particular function. That is, the server may be contained within a single hardware unit or be distributed among several or many different hardware units.

[023] The computing device 210 comprises: at least one processor 203 and at least one memory 207 including computer program code. The at least one memory 207 and the computer program code are configured to, with the at least one processor 203, cause the computing device 210 at least to: process a search term (diagrammatically represented as a data packet 216) against all searchable content 106 within the hosted document 100 to locate an article 212 containing the search term 216, the article 212 being one of a plurality of articles 108 within the hosted document 100. The computer program code then has the at least one memory 207 and the at least one processor 203 visually demarcate 214 the article 212 (i.e. the article containing the search term 216) to distinguish the article 212 from a remainder of the hosted document 100.

[024] By having the article 212 visually demarcated 214, the result of the search is that the defined area of the article 212 (i.e. all content, including the text and graphics within the article 212) is presented, instead of the exact location of only the search term 216 within the article 212. The context within which the search term 216 is used becomes more readily discernable and therefore makes locating of relevant articles more efficient. This is especially advantageous when the document 100 is a listing of classified advertisements (such as shown in Figures 1, 2A and 2B). This is because advertisements having only the search term 216 as content can be quickly eliminated from advertisements having the search term 216 as a portion of their content promoting a desired product, service, or event.

[025] In the embodiment shown in Figure 2A, the article 212 is visually demarcated 214 using a border around the article 212. However, other visual demarcations of the article 212 are possible, such as highlighting the article 212 and

changing the colour of the article 212 content (both not shown). Highlighting of such an article 212 may comprise configuring a substantial portion of the space that the article 212 occupies to have a different colour from the background of the hosted document 100. In one embodiment, this substantial portion covers the entire area of the article 212 that is confined by its surrounding border, including the space between the inner perimeter of the border and the content of the article that conveys information (such as the text and logos shown in Figure 2A). In another embodiment, this substantial portion covers only the area of the article 212 having the content of the article that conveys information, i.e. the space that is immediately adjacent to the inner perimeter of the border has the same colour as the background of the hosted document 100. Changing the colour of the article 212 content may comprise configuring the information conveyed (such as the text and logos shown in Figure 2A) in the article 212 to have a colour that is different from the background of the hosted document 100. It is also possible that the article 212 is visually demarcated by performing one or more of the following: having a border placed around the article 212, highlighting of the article; and changing the colour of the article 212 content.

[026] In Figure 2A, the search term 216 is the acronym "MRT". The processor 203 then visually demarcates 214 all of the articles 212 that contain the acronym "MRT" by placing a border around each of the articles 212, as shown in Figure 2A.

[027] Before processing the search term 106, the at least one memory 207 and the computer program code are (in one embodiment) further configured to, with the at least one processor 203, cause the computing device 210 to convert the hosted document 100 to a fixed layout format. In a preferred embodiment, the fixed layout format is an image file comprising any one or more of the following data formats: jpeg, bmp or tiff.

[028] In one exemplary implementation, this document conversion is performed when the computing device 210 is a server, whereby the converted document will then be transmitted by the server to a client device that is configured to locate the article 212 containing the search term 216. The processor 203 of the computing device 210, realised by such a server, may use, for example, the following process to perform this conversion. A Page Layout (PGL) software is used

to paginate (fix the layout) and output the document 100 into a PDF having one or more pages with text in vector form. An exporter software is used to extract text from advertisements created in an advertisement booking system. The page layout software, the exporter software and the advertisement booking system are from "Newscycle™". Open source software, like Xpdf, is used to extract the text from advertisements that are submitted in PDF format. The output PDF files are converted by image conversion software, such as Asura™ (by "One Vision"), to be converted to JPEG and then output as a PDF file in graphical format. The converted PDF file is then downsampled by Adobe Acrobat™ to reduce the size of the files for faster download into mobile client devices

[029] By converting the hosted document 100 to a fixed layout format, the layout of the hosted document 100 is maintained. A fixed layout format is preferred especially since this presents the document 100 in a manner independent of application software, hardware, and operating systems of the computers that remotely access the hosted document 100, thereby reducing the possibility of all articles 108 being seen in a layout that is different from its original layout. The fixed layout format may further be in a copy-protected form. This prevents content, such as text, of any article 108 from being extracted and reformatted for unauthorized use. The copy protection also prevents text in the converted document to be searchable. To enable a text search of such a converted document, its content may be indexed. One implementation indexes the content of the converted document by separately storing all text found in the hosted document 100 before or during conversion. This indexing is described in greater detail below.

[030] The at least one memory 207 and the computer program code are further configured to, with the at least one processor 203, cause the document hosting server 210 to allow selection of any one of the plurality of articles 108 within the hosted document 100. Selection of any one of the plurality of articles 108 within the hosted document 100 may occur by placing a cursor (by way of a mouse) over any article 108 and using the cursor to hold onto the article 108. Selection of any one of the plurality of articles 108 within the hosted document 100 may also be achieved by a user touching the portion of a display where any article 108 appears, where the hosted document 100 is accessed using a device where selection is via a touch screen. Preferably, the selection of any one of the plurality of articles 108

within the hosted document 100 comprises allowing a copy of the selected article 108 to be made. This facilitates quick and easy sharing and storing of the articles 212 containing the search term 216.

[031] In another exemplary implementation, selection and copying of any one of the plurality of articles 108 within the hosted document 100 is only possible after an article containing the search term 216 is located. Thus, the visually demarcated article 218 will only be selectable after the processor locates the article 218 from processing the search term 216 against all searchable content 106 within the hosted document 100. That is, if the article 218 is not visually demarcated 214, the article 218 would not be selectable, so that the articles 108 that do not contain the search term 216 are also not selectable. By allowing only the visually demarcated article 218 to be selectable, this ensures that other articles 108, which do not contain content of interest, are not selected. This facilitates the ease of correctly selecting the visually demarcated article 218, especially in the scenario where the hosted document 100 is surrounded by articles 108 that occupy a substantially larger area compared to that occupied by the visually demarcated article 218; or the visually demarcated article 218 occupies a small area of the hosted document 100, for example, from having only a few lines of text.

[032] By having the computing device 210 convert the hosted document 100 to a fixed layout format, which is in a copy-protected form, and enabling for a copy of the visually demarcated article 218 to be made, the following is achieved. Documents (not shown) comprising one or more articles having text and graphics could be protected from unauthorized extraction, while enabling for the articles to be indexed for searching purposes, i.e. to determine if each of their content contains the search term 216. The articles can then be extracted in their original format, where they are stored and shared in their original format, thereby preventing presentation of the shared article in an altered or unauthorised format. There is thus no compromise in the original format of the article, which is advantageous for documents where maintenance of an original presentation style is important. For example, the document hosting server 210 could replicate the original presentation style of traditionally printed newspapers when they are hosted in a digital format in the document hosting server 210. The content (such as advertisements and news articles) of the digital newspapers would be protected and searchable. The results of

a search may be highlighted within a page of the digital newspapers, with the integrity of the advertisements and news articles maintained.

[033] All content within the hosted document 100 may be indexed, for example, by having the at least one memory 207 and the computer program code be further configured to, with the at least one processor 203, cause the document hosting server 210 to store all searchable content 106 as separate data against which the search term 216 is processed to locate the article 212. In one implementation, this indexing is performed by a server, i.e. when the computing device 210 is a server. The separate data, against which a search term 216 is to be processed, is transmitted by the server to a client device that is configured to locate an article 212 containing the search term 216. Having the content of the hosted document 100 stored as separate data may be required when the hosted document 100 is in image file format, whereby a copy of all text in the hosted document 100 is saved as this separate data, since text in such a hosted document 100 becomes an image which would not be as readily searched, compared to text data. In addition to content such as the text and graphics of each article (108 and 212), the separate data 106 may comprise coordinates of each of the plurality of articles 108. The coordinates allowing the article 212 containing the search term 216 to be located and visually demarcated 214 from the remainder of the hosted document 100. The separate data may be stored as metadata.

[034] In the implementation where the indexing is done in the computing device 210 realised as the server, at least one memory of the server and computer program code within the memory are further configured to, with at least one processor of the server, cause the server to transmit the separate data to a client device. The client device may be a remote computer terminal or a mobile device such as a smart phone. The transmission of the separate data into the client device allows the client device to use its own resources (such as both the processor and the memory of the client device) to perform location of the article 212 containing the search term 216, rather than taxing the resources of the server to perform the search and location function. This has the advantage of freeing up the processor and memory of the server for other processes, such as performing the location of the article 212 containing the search term 216 from client devices that request for the search to be performed at the server itself.

[035] Figure 2B shows a schematic of the computing device 210 of Figure 2A used to host a document 200.

[036] The document 200 has different content 206 compared to the content 106 of the document 100 of Figure 1 and Figure 2A. However, similar to the document 100, the content 206 of document 200 has text 202 and graphics 204. The content 206 is also organised into one or more (or a plurality of) articles 208. Each article 208 is configured to occupy a space with its own distinct or unique placement within document 200, so that each article 208 is identified to the processor 203 of the computing device 210 by its distinct or unique placement, rather than the content of the article 208. The content of the article 208 may include any one or more of text 202 and graphics 204.

[037] In Figure 2B, the search term 216 is the island resort "Sentosa". Similar to Figure 2A, the processor 203 visually demarcates 214 all of the articles 212 that contain the word "Sentosa" by placing a border around each of the articles 212, as shown in Figure 2B. Figure 2B shows that if the article 212 contains graphics, such as a picture 250, the picture 250 will become part of the visually demarcated article 218.

[038] Figure 3 shows an exemplary architecture 300 for the computing device 210 shown in Figures 2A and 2B. The following description of the architecture 300 is provided by way of example only and is not intended to be limiting. Therefore, one or more elements / components of the architecture 300 may be omitted. Also, one or more elements / components of the architecture 300 may be combined together. Additionally, one or more elements / components of the architecture 300 may be split into one or more component parts.

[039] With reference to Figure 3, the exemplary architecture 300 includes a processor 303 for executing software routines. Although a single processor is shown for the sake of clarity, the architecture 300 may also include a multi-processor system. The processor 303 is connected to a communication infrastructure 306 for communication with other components of the architecture 300. The communication infrastructure 306 may include, for example, a communications bus, cross-bar, or network.

[040] The architecture 300 further includes a main memory 307, such as a random access memory (RAM), and a secondary memory 310. The secondary memory 310 may include, for example, a hard disk drive 312 and/or a removable storage drive

314, which may include a floppy disk drive, a magnetic tape drive, an optical disk drive, or the like. The removable storage drive 314 reads from and/or writes to a removable storage unit 318 in a well-known manner. The removable storage unit 318 may include a floppy disk, magnetic tape, optical disk, or the like, which is read by and written to by removable storage drive 314. As will be appreciated by persons skilled in the relevant art(s), the removable storage unit 318 includes a computer readable storage medium having stored therein computer executable program code instructions and/or data.

[041] In an alternative implementation, the secondary memory 310 may additionally or alternatively include other similar means for allowing computer programs or other instructions to be loaded into the computing device 210. Such means can include, for example, a removable storage unit 322 and an interface 350. Examples of a removable storage unit 322 and interface 350 include a program cartridge and cartridge interface (such as that found in video game console devices), a removable memory chip (such as an EPROM or PROM) and associated socket, and other removable storage units 322 and interfaces 350 which allow software and data to be transferred from the removable storage unit 322 to the computing device 210.

[042] The architecture 300 also includes at least one communication interface 324. The communication interface 324 allows software and data to be transferred between computing device 210 and external devices via a communication path 326. In various implementations, the communication interface 324 permits data to be transferred between the computing device 210 and a data communication network, such as a public data or private data communication network. The communication interface 324 may be used to exchange data between different computing devices 210 which such computing devices 210 form part an interconnected computer network. Examples of a communication interface 324 can include a modem, a network interface (such as an Ethernet card), a communication port, an antenna with associated circuitry and the like. The communication interface 324 may be wired or may be wireless. Software and data transferred via the communication interface 324 are in the form of signals which can be electronic, electromagnetic, optical or other signals capable of being received by communication interface 324. These signals are provided to the communication interface via the communication path 326.

[043] As shown in Figure 3, the architecture 300 further includes a display interface 302 which performs operations for rendering images to an associated display

330 and an audio interface 332 for performing operations for playing audio content via associated speaker(s) 334.

[044] As used herein, the term "computer program product" may refer, in part, to removable storage unit 318, removable storage unit 322, a hard disk installed in hard disk drive 312, or a carrier wave carrying software over communication path 326 (wireless link or cable) to communication interface 324. A computer readable medium can include magnetic media, optical media, or other recordable media, or media that transmits a carrier wave or other signal. These computer program products are devices for providing software to the computing device 210. Computer readable storage medium refers to any non-transitory tangible storage medium that provides recorded instructions and/or data to the computing device 210 for execution and/or processing. Examples of such storage media include floppy disks, magnetic tape, CD-ROM, DVD, Blu-ray Disc™, a hard disk drive, a ROM or integrated circuit, USB memory, a magneto-optical disk, or a computer readable card such as a PCMCIA card and the like, whether or not such devices are internal or external of the architecture 300. Examples of transitory or non-tangible computer readable transmission media that may also participate in the provision of software, application programs, instructions and/or data to the computing device 210 include radio or infra-red transmission channels as well as a network connection to another computer or networked device, and the Internet or Intranets including e-mail transmissions and information recorded on Websites and the like.

[045] The computer programs (also called computer program code) are stored in main memory 307 and/or secondary memory 310. Computer programs can also be received via the communication interface 324. Such computer programs, when executed, enable the processor 303 to have the computing device 210 perform one or more steps that initiate the visual demarcation of an article 212 containing a search term 216, as described above with reference to Figures 2A and 2B. Accordingly, such computer programs may represent controllers of the computing device 210.

[046] Software may be stored in a computer program product and loaded into the computing device 210 using the removable storage drive 314, the hard disk drive 312, or the interface 350. Alternatively, the computer program product may be downloaded to the computing device 210 over the communications path 326. The software, when executed by the processor 303, causes the computing device 210 to perform the necessary operations to execute the method as shown in Figure 4.

[047] With reference to Figure 3, the method according to the flow chart shown in Figure 4 may be implemented as software and stored in a non-transitory fashion in the secondary memory 310 or the removable storage units 318, 322 of the computing device 210. The software is executable by the processor 303 of the computing device 210. The method allows for the location of an article containing a search term in a hosted document (which may be hosted, for example, in the computing device 300 of Figure 3). The method includes the following steps as detailed below.

[048] In step 404, the search term is processed against all searchable content within the hosted document to locate an article containing the search term. The article is one of a plurality of articles within the hosted document.

[049] In step 406, the located article is visually demarcated to distinguish the article from a remainder of the hosted document, such as from the other articles that do not contain the search term. The visual demarcation of step 406 may comprise any one or more of placement of a border around the article, highlighting the article and changing the colour of the article content.

[050] Figure 5 shows additional steps which may be performed in a preferred implementation of the method shown in Figure 4. Before processing the search term against all searchable content within the hosted document, a preceding step 502 has the hosted document converted to a fixed layout format. In one implementation, the fixed layout format is in a copy-protected form.

[051] After the visual demarcation of the article of step 406, step 508 may be performed to configure the demarcated article be selectable. In one exemplary implementation, configuring the visually demarcated article to be selectable comprises allowing the visually demarcated article to be copied.

[052] In step 510, all searchable content is stored as separate data against which the search term is processed to locate the article containing the search term. Such separate data may comprise coordinates of each of the plurality of articles in the hosted document, the coordinates allowing the article containing the search term to be located and visually demarcated from the remainder of the hosted document. In one implementation, the separate data is stored as metadata. Finally, in step 512, the separate data is transmitted to a client device.

[053] Figure 6 shows a process flow that occurs in one implementation of the method shown in Figure 5.

[054] In step 602, a document is protected by converting it into a graphical format, such as jpeg, bmp or tiff. The coordinates of each article within the document is extracted and stored along with the searchable text of the article. This is done to facilitate mapping which occurs in later step 612. The coordinates of each article and the searchable text of the article are stored separately from the converted document. In one implementation, the coordinates of each article and the searchable text of the article are stored as metadata.

[055] In step 604, the converted document and the metadata are uploaded to a server that is configured to perform the method as described with respect to Figure 5. In one implementation (not shown), the converted document may then be accessed using a client device, where the server can then be queried with a search term that is received from the client device. The search term is then processed against the searchable text. If the search term is found within the searchable text, the coordinates matching the article that contains the search term then serves as a pointer to indicate to the processor of the server which portion of the converted document is to be visually demarcated, such as by highlighting the article.

[056] As an alternative to using the resources of the server to perform the search, step 606 has the metadata and the converted document downloaded into a client device. An application that performs the method shown in Figure 4 will be hosted in the server, whereby this application will also be downloaded into the client device, along with the metadata and the converted document. After the metadata and the converted document are downloaded and the application installed, the search term can then be entered into the client device in step 608. When the search term is found in step 612, the corresponding coordinates of the article containing the searched text is located and highlighted on the converted document using the coordinates of the article in the meta-data, in a manner similar to having the server perform the search. If the search term exists in one or more articles, these articles will also be highlighted. Sharing or storing of the highlighted article is then done by using the client device to select the article by tapping and holding on to the article.

[057] In another implementation, shown as step 602 to 606, conversion of the document into graphical format is performed directly in a server. Similarly, the extraction

of the coordinates of each article within the document for storage, along with the searchable text of the article, as separate metadata is also performed directly in a server. Thus, the step 604 of uploading the converted document and the metadata into a server is not needed in this other implementation.

[058] Figure 7 depicts a block diagram 700 embodying a network 702 to which a server 710 is connected via coupling 713 which may be wired and/or wireless. A plurality of client devices 712 are each coupled to the network 702 via a coupling 715, which may be wired and/or wireless coupling.

[059] The server 710 includes a processor 703 and a memory 707. The memory 707 stores an application 735 that when executed causes one or more processors to perform one or more steps of the method shown and described with respect to Figure 5. The server 710 thus acts as a host to store this application 735 that is to be downloaded to an external computing device, where the application is installed and executed. However, the application 735 may also be installed and executed by the hosting server 710. When executed, such an application 735 locates an article containing a search term in a hosted document by processing the search term against all searchable content within the hosted document to locate an article containing the search term. Amongst a plurality of articles within the hosted document, the article containing the search term is visually demarcated to distinguish the article from a remainder of the hosted document.

[060] In the embodiment shown in Figure 7, the application 735 is transmitted, through a transmitter 730 in the server 710, to the client devices 712, where the application 735 is to be executed or installed. Execution or installation of the application 735 in the client device 712 ensures that location of the article is confined within the client device and does not require communication with the server 710 when locating an article containing the search term. Thus, such client devices 712 do not require a connection with the server 710 to perform the search shown and described with respect to Figure 5.

[061] The processor 703 of the server 710 may execute the application 735 to the extent of converting the hosted document to a fixed layout format and storing all searchable content as separate data (i.e. steps 502, 508 and 510 described with respect to Figure 5) against which the search term is processed to locate the article. The converted hosted document and the separate data (both collectively symbolised

using reference numeral 725) may be, in one implementation, transmitted together with the application 735. However, in another implementation, the converted hosted document and the separate data 725 may be separately transmitted, especially when the application 735 is already installed into the client device 712.

[062] The network 702 may be a plurality of interconnected servers through which data is routed between the client devices 712 and the server 710. The data that is routed comprises the application 735 stored in the memory 707, the converted document and the separate data 725 sent from the server 710 to any one or more of the client devices 712.

[063] In the implementation where the server 712, rather than the client device 714, performs the search, the data that is routed comprises the search term that is sent from any one or more of the client devices 712 to the document hosting server 210 for processing against all searchable content within a document hosted by the document hosting server 210 by the processor 203 of the document hosting server 210. Routed data also comprises data that allows a display on each of the client devices 712 to show the results of the search, namely the visual demarcation of articles in the hosted document that contain the search term, as explained with respect to Figures 2A and 2B above.

[064] It will be appreciated by a person skilled in the art that numerous variations and/or modifications may be made to the present invention as shown in the specific embodiments without departing from the spirit or scope of the invention as broadly described. The present embodiments are, therefore, to be considered in all respects to be illustrative and not restrictive.

CLAIMS

1. A method of locating an article containing a search term in a hosted document, the method comprising:

processing the search term against all searchable content within the hosted document to locate an article containing the search term, the article being one of a plurality of articles within the hosted document; and

visually demarcating the entire article to distinguish the article from a remainder of the hosted document.

2. The method of claim 1, further comprising configuring any one of the plurality of articles within the hosted document to be selectable.

3. The method of claim 2, wherein configuring any one of the plurality of articles within the hosted document to be selectable further comprises configuring the selected article to be copied.

4. The method of claims 1 to 3, wherein visually demarcating the article comprises any one or more of placement of a border around the article, highlighting the article and changing the colour of the article content.

5. The method of claims 1 to 4, further comprising converting the hosted document to a fixed layout format before processing the search term.

6. The method of claim 5, wherein the fixed layout format is in a copy-protected form.

7. The method of claim 5 or 6, further comprising storing all searchable content as separate data against which the search term is processed to locate the article.

8. The method of claim 7, wherein the separate data comprises coordinates of each of the plurality of articles, the coordinates allowing the article containing the

search term to be located and visually demarcated from the remainder of the hosted document.

9. The method of claim 7 or 8, further comprising storing the separate data as metadata.

10. A memory storing an application that when executed causes one or more processors to perform the method of claims 1 to 9.

11. A server containing the memory of claim 10.

12. The server of claim 11, wherein the server comprises a transmitter that is configured to transmit the application to a client device for execution of the application in the client device to perform the method of claims 1 to 4.

13. The server of claim 12, wherein the server is configured to execute the application in the server to perform the method of claims 5 to 9, and transmit the converted hosted document and the separate data to the client device, for location of the article to be confined within the client device.

14. A computing device for article location, the computing device comprising:

at least one processor; and

at least one memory including computer program code;

the at least one memory and the computer program code configured to, with the at least one processor, cause the computing device at least to:

process a search term against all searchable content within a hosted document to locate an article containing the search term, the article being one of a plurality of articles within the hosted document; and

visually demarcate the entire article to distinguish the article from a remainder of the hosted document.

15. The computing device of claim 14, wherein the at least one memory and the computer program code are further configured to, with the at least one processor,

cause the computing device to allow selection of any one of the plurality of articles within the hosted document.

16. The computing device of claim 15, wherein the selection of any one of the plurality of articles within the hosted document comprises allowing a copy of the selected article to be made.

17. The computing device of claims 14 to 16, wherein visual demarcation of the article comprises any one or more of placement of a border around the article, highlighting the article and changing the colour of the article content.

18. The computing device of claims 14 to 17, wherein the computing device is a server or a client device.

19. The computing device of claim 18, wherein the computing device is a server and the at least one memory and the computer program code are further configured to, with the at least one processor, cause the server to convert the hosted document to a fixed layout format before processing the search term.

20. The computing device of claim 19, wherein the fixed layout format is in a copy-protected form.

21. The computing device of claim 19 or 20, wherein the fixed layout format is an image file comprising any one or more of the following data formats: jpeg, bmp or tiff.

22. The computing device of claims 19 to 21, wherein the at least one memory and the computer program code are further configured to, with the at least one processor, cause the computing device to store all searchable content as separate data against which the search term is processed to locate the article.

23. The computing device of claim 22, wherein the separate data comprises coordinates of each of the plurality of articles, the coordinates allowing the article

containing the search term to be located and visually demarcated from the remainder of the hosted document.

24. The computing device of claim 22 or 23, wherein the separate data is stored as metadata.

25. The computing device of claims 22 to 24, wherein the at least one memory and the computer program code are further configured to, with the at least one processor, cause the computing device to transmit the converted hosted document and the separate data to the client device, for location of the article to be confined within the client device.