

BIOMETRIC AND DEMOGRAPHIC DATA TRANSFER AND MANAGEMENT SYSTEM AND APPARATUS

RELATED APPLICATIONS

[0001] This claims the benefit of U.S. Provisional Application Number 60/810,588, filed June 2, 2006, entitled "DATA TRANSFER AND MANAGEMENT SYSTEM."

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BACKGROUND

[0003] Many modern day businesses require background checks, such as criminal background checks of their prospective or current employees. Such background checks typically require that an employee provide their fingerprints on fingerprint cards and forward the fingerprints to a state or federal agency such as the Federal Bureau of Investigations ("FBI"). The state or federal agency then performs a criminal background check based on its records and the fingerprints. This process is presently burdensome on the applicant and consumes an inordinate amount of time and resources.

[0004] The conventional method in which businesses perform criminal background checks is by directing an applicant to an entity authorized to capture the applicant's fingerprints and perform fingerprint-based criminal history background checks. This generally involves the applicant going to a police station to pick up a fingerprint card. The police station captures

the applicant's fingerprints on the fingerprint card. The fingerprint card is then converted into electronic format or physically mailed to the FBI's National Criminal Information Center ("NCIC") or the state criminal history repository for analysis. The results of the criminal background check are eventually forwarded to the business requesting the search.

[0005] This approach to performing a criminal background check, existing approaches to performing criminal history background checks have numerous drawbacks. The primary drawback is that criminal history background checks frequently take weeks, if not months to complete. Indeed, such searches often take 16 to 18 weeks to get a response. Another drawback is that such specialized software is expensive and difficult to use. It also presents problems in quickly transferring fingerprints to agencies for a fast turnaround. Existing systems require that specialized software and hardware be installed locally on the entity performing the background check's computers.

SUMMARY

[0006] Accordingly, one object of the present invention is to resolve or improve upon one or more of the above-mentioned drawbacks.

[0007] In one embodiment of the invention, an apparatus is described for performing an authenticated background check on an applicant. The apparatus includes a first interface, such as a website or URL, for input of demographic data related to the applicant. Once an applicant provides their demographic data, a receipt is generated for the applicant. The receipt provides instructions to the applicant regarding a second location, where the applicant can go to have their fingerprints captured and their identity authenticated. The receipt further includes a barcode encoded with information relating to the applicant.

[0008] The applicant then goes to the second location to have their biometric data captured. For example, the applicant's fingerprints can be captured. A clerk at the second location can scan the receipt barcode to

call up the applicant's previously input demographic information. In addition, the clerk confirms the applicant's identity by checking the applicant's identification against the demographic data on the clerk's interface. After the applicant's identity is confirmed, the clerk can capture and digitize the applicant's fingerprints. The clerk's interface provides a qualitative analysis or "grade" of the fingerprints. If the grade meets or exceeds predetermined standards for the biometric data quality, then the applicant's digitized fingerprints are forwarded to the agency performing the criminal background check.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] The invention will be better understood and objects other than those set above will become apparent when consideration is given to the following detailed description thereof. Such description makes reference to the annexed flow diagram and drawings where:

[0010] Figure 1 illustrates a flow diagram illustrating a first embodiment of a data transfer and management system according to one embodiment of the present invention.

[0011] Figure 2 illustrates an exemplary demographic information input interface according to one embodiment of the present invention.

[0012] Figure 3 illustrates an exemplary demographic information correctness confirmation interface according to one embodiment of the present invention.

[0013] Figure 4 illustrates an exemplary receipt for a fingerprint transaction according to one embodiment of the present invention.

[0014] Figure 5 illustrates an exemplary login interface for a clerk according to one embodiment of the present invention.

[0015] Figure 6 illustrates an exemplary fingerprint scan confirmation interface without fingerprints according to one embodiment of the present invention.

[0016] Figure 7 illustrates an exemplary fingerprint scan confirmation interface with a plurality of graded exemplary fingerprints according to one embodiment of the present invention.

[0017] Figure 8 illustrates a fingerprint scan confirmation verified with an officer or clerks signature and the applicant's signature according to one embodiment of the present invention.

[0018] Figure 9 illustrates a report feature according to one embodiment of the present invention.

[0019] Figure 10 illustrates an exemplary report feature including applicants processed during an exemplary time frame according to one embodiment of the present invention.

DETAILED DESCRIPTION OF THE DRAWINGS AND THE PRESENTLY PREFERRED EMBODIMENTS

[0020] The invention is described with reference to the drawings in which like elements are referred to by like numerals. The relationship and functioning of the various elements of this invention are better understood by the following detailed description. However, the embodiments of this invention as described below are by way of example only, and the invention is not limited to the embodiments illustrated in the drawings. It should also be understood that the drawings are not to scale and in certain instances details have been omitted, which are not necessary for an understanding of the present invention, such as conventional details of fabrication and assembly.

[0021] In general, the present system provides a system for capturing, transferring, and managing data, and in particular, demographic and biometric data. As illustrated in Figure 1, the present system includes two main data capture and management segments or interfaces, each segment having a number of steps. The first segment generally involves step 14 of accessing a predetermined website and step 18 of providing the service provider demographic information about the applicant. The first

segment is carried out by the applicant. The second segment generally involves step **22** of fingerprinting the applicant, step **26** of capturing images of the applicant's fingerprints, and step **30** of associating the images with the demographic information provided in the first segment. The second segment is carried out at the location of the fingerprint capture company. Once the first two segments are completed, i.e., the fingerprint images are associated with the demographic information, the combined record(s) are forwarded to the appropriate federal or state agency, such as the FBI, for fingerprint and criminal background analysis.

[0022] As illustrated in Figure 1, the first step involves enrolling the applicant. To enroll the applicant, the entity that needs the background or fingerprint analysis of a particular applicant provides the applicant with an enrollment website addressor URL. The applicant then accesses the website or URL to register their demographic data and obtain a "barcode" receipt. When logging into the website, the applicant must confirm the transaction by entering randomly generated characters in a graphic box. This system confirms that the transaction is real.

[0023] At the predetermined website, the applicant enrolls by providing their demographic data. The applicant's demographic data can include a wide variety of information necessary for a background check or for other reasons. As illustrated in Figures 2-3, exemplary demographic data includes the applicant's name, date of birth, social security number, identification number, street address, gender, weight, height, eye color, and/or hair color. Typically, three of these specific pieces of information are used in later steps to initiate the fingerprint software, as described in further detail below.

[0024] On the enrollment website, required fields are indicated in red and optional fields are indicated in black. As the applicant completes required fields, the field changes from red to black to indicate that a field is complete. In addition, as the applicant moves from field to field, the enrollment website provides a help box at the top of the screen giving the

applicant an explanation of the field, including how the data should be formatted.

[0025] After the applicant has completed the demographic data entry interface screen, the Applicant is given an opportunity to review/edit the data prior to scheduling the fingerprinting service. To complete the review, the applicant must check the certification box located at the bottom left corner of the screen as shown in Figure 3. By checking the certification box, the Applicant certifies that the data is accurate and valid.

[0026] Referring to Figure 4, once an applicant successfully enrolls, a bar code receipt is provided to the applicant. The bar code receipt provides the applicant with detailed driving instructions to the nearest and/or most convenient fingerprinting location. The bar code receipt can also inform the applicant whether an appointment is necessary for the fingerprinting, and if so, how to schedule an appointment. For confirmation, a copy of the bar code receipt is delivered to the applicant's email account. The applicant can then print the receipt that is generated on the screen (or received via email) and bring it along with the registered Identification (Driver's License, Passport, etc) to the representative's office for fingerprinting.

[0027] After an applicant has registered and received a bar code receipt, the applicant is ready to be fingerprinted at the predetermined fingerprinting location. At the fingerprint location, the applicant provides a representative with the applicant's photographic identification (e.g., a driver's license) and the bar code receipt.

[0028] Referring to Figure 5, the representative or clerk then logs into a predetermined image capture website by entering the provided URL in the web browser. As shown in Figure 5, a login window will appear. When the login window appears, the representative inputs their license key, user name and password. The representative next inputs the applicant's identification information, e.g., bar code, the unique number from the government issued photo ID registered by the applicant (e.g., a driver's

license number), and/or the applicant's last name. In the event the data was entered incorrectly, the system will prompt the representative to reenter the data. When the data is entered correctly, the system will move to the fingerprint capture screen which is shown at Figure 6. The first time the system is used, the representative must install active-x components required to operate the scanner. Such Active-x components are required to submit fingerprints directly to the fingerprint website.

[0029] Once the representative is logged in, the web-based application will retrieve the applicant data and link it to the upcoming fingerprint transaction. When the applicant is identified, the applicant's demographic information is automatically downloaded from the fingerprinting website and automatically filled into the relevant fields on an electronic form DF-258 fingerprint card. The demographic information is preferably encrypted so as to preserve the applicant's privacy. That is, by entering the demographic information into the enrollment website, the applicant will not have to disclose sensitive information to the representative on the fingerprint card. This protects the applicant's privacy.

[0030] The representative can then assist the applicant by fingerprinting the applicant using a standard ink pad and FD-258 fingerprint card. Once the applicant is fingerprinted, both the representative and the applicant sign the fingerprint card. The card is then scanned using a desktop scanner. The desktop scanner is typically pre-approved by the federal or state agency for use in scanning fingerprints. An exemplary scanner is the Epson 3170 Scanner. To initiate the fingerprint capture, the representative should click the fingerprint button. Clicking on the button will open a dialog box that allows the representative to link the applicant's demographic data to the fingerprint images.

[0031] After the Active-X components are installed and the fingerprint card is completed, the representative can scan the fingerprint images. To initiate the scanning, the representative places the FD-258 applicant fingerprint card face down in the upper right hand corner of the 3170

Epson Scanner. If the card is placed in the wrong position, the quality of the capture will suffer. Once the card is placed face down on the scanner, the representative initiates scanning by clicking the scan button **108** on the fingerprint website as illustrated in Figure 6. When the representative successfully initiates scanning, a pop up dialog box will show the progression of the scanning process.

[0032] Referring to Figure 7, the fingerprint website grades the quality of the prints after the images have been scanned. The scoring is based on a **20** point scale. **13** and above are fingerprints deemed sufficient to submit, see e.g. prints **116** on Figure 7. Prints scoring **13** and above will display a "Green" scoring box, see e.g., prints **112** on Figure 7. Prints scoring **12** and below will display a "Red" scoring box. Prints scoring above **13** are labeled green which signifies that they are of sufficient quality to be submitted to the FBI. Prints scoring below **13** are labeled red, signifying that they are insufficient quality to be submitted to the FBI. Red prints must be replaced with sufficient quality prints before the system will allow an operator or representative to submit prints.

[0033] To update poor quality prints the representative should roll new prints on a new FD-258 applicant fingerprint card. The representative should place the new card face down on the Epson 3170 Scanner and click scan **108** again. It should be noted that for prints that are scored "Insufficient Quality", the representative does not have to re-roll the entire card. Rather, the representative need simply roll the poor quality prints on a separate card, making sure to place the print(s) in the appropriate fingerprint box(es). The second card can then be placed on the scanner and scanned as described above.

[0034] The fingerprint website gives the representative the option of "Keep prints with the Best Score" or "Replace Prints". "Keeping Prints With Best Score" will save the previous images and combine them with the new better quality images and create one electronic submission with sufficient prints. Selecting "Replace Prints" will eliminate the prior card and update

the images with the images from the second card. Ultimately, when sufficient quality images are captured, the images are submitted to the website.

[0035] Another feature of the present invention is the ability to annotate various aspects of an application. To enter an annotation, the representative should select the annotate button **122**, as shown in Figure 7. For example, the representative can select the following annotation options: (i) Amputation; or (ii) Unable to print. The representative can then select the appropriate annotation and then click "ok." The fingerprint website then updates the fingerprint image with the selected annotation. This should be repeated for all required fingerprints.

[0036] Referring to Figure 8, the fingerprint website can also be configured to capture signatures off of a FD-258 FBI Certified paper fingerprint card. To capture the signatures, click the scan signature button **126** (Figure 7). The desktop scanner will re-scan the fingerprint card and collect the signatures. After the scanner completes scanning the signatures, they will be captured and displayed in **130, 132**. The representative must make sure that he/she is using FD-258 FBI Certified or other appropriate, pre-qualified fingerprint cards when scanning signatures. The representative should also make sure that both the representative and the applicant sign the card in the appropriate spaces on the FD-258 print card.

[0037] As illustrated in Figure 7, when the fingerprint images and signatures are captured and scanned, the "SUBMIT" button **138** will become bold, indicating that that representative can transmit the fingerprint images.

[0038] As illustrated in Figure 7, to view submitted transactions, the representative can click on the submitted button located on the left side main navigation panel. When the submitted button is clicked the representative is given several search options, as shown in Figure 9. When the search report parameters appear, enter the desired search.

Users can search by each parameter individually or use multiple fields to restrict a search. For example, to locate John Smith, users can enter his name into the search field (name only), or over a specific date range. Moreover, the user can enter data in all these fields to restrict the search to a specific set of parameters. Click the 'Reset' button to clear the search parameter field or click the 'Submit' button to begin the specified search.

[0039] Referring to Figure 10, the results of a search are displayed in three columns: (i) First name, (ii) Last Name, and (iii) date posted to the server. To re-order the search result Report, click on the top of the column header and the data will re-order in descending or ascending order. The representative can download the reports by clicking on the 'Download' button. When clicking on the download button, the fingerprint website will download the report in a table formatted by Excel(R).

[0040] A representative profile section can also be provided. The 'My Profile Section' enables the representative to update his/her name, password and email address.

[0041] It is therefore intended that the foregoing detailed description be regarded as illustrative rather than limiting, and that it be understood that it is the following claims, including all equivalents, that are intended to define the scope of this invention.

CLAIMS:

1. An apparatus for capturing, transferring and managing demographic and biometric data as part of an authenticated background check on an applicant,
5 comprising:
- a first interface means for input of demographic data related to the applicant, the first interface means for input of demographic data being situated at a first location;
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- a second interface means for input of identification information related to the applicant, the second interface means for input of identification information being situated at a second location, wherein the second interface means comprises a means for correlating the identity of the applicant with the demographic data input at
15 the first location using the identification information and automatically completing fields in an electronic biometric form using an encrypted version of the demographic information;
- a scanner for input of biometric data related to the applicant, the scanner for
20 input of biometric data being situated at the second location;
- a processing means for associating the demographic data and biometric data related to the applicant;
- 25 a network spanning the first location and the second location, whereby the first and second interface means, the scanning means, and the processing means are operatively connected.
2. The apparatus of claim 1, wherein the means for correlating is a bar code
30 reader operatively connected to the second applicant interface means.
3. The apparatus of claim 2, wherein the biometric card is a fingerprint card, and wherein the scanner comprises a pre-qualified desktop scanner for receiving the fingerprint card.
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4. The apparatus of claim 1, wherein the scanner is a biometric information

capture device.

5. The apparatus of claim 4, wherein the biometric information capture device is a fingerprint scanner.

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6. The apparatus of claim 4, wherein the biometric information capture device is a retinal scanner.

7. The apparatus of claim 1, wherein the demographic data comprises identification information related to the applicant.

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8. The apparatus of claim 1, wherein the demographic data is selected from the group consisting of: name, social security number, address, sex, age, driver's license number, passport number, and credit card number.

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9. The apparatus of claim 1, wherein the first interface means comprises a first website and the second interface means comprises a second website.

10. The apparatus of claim 9, wherein the second interface means comprises a user login section.

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11. A method of capturing, transferring and managing demographic and biometric data as part of a criminal background investigation, comprising the steps of:

25 a) providing the apparatus of claim 1;

b) providing access to the first interface means;

c) receiving demographic data related to the applicant in the first interface means at the first location;

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d) generating a receipt at the first location, the receipt comprising identification information relating to the applicant and contact information relating to the second location;

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e) receiving the receipt at the second location;

f) confirming identity of applicant at the second location using the identification information and automatically completing fields in an electronic biometric form using an encrypted version of the demographic information;

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g) scanning biometric data related to the applicant; and

h) delivering biometric data to a third location.

10 12. The method of claim 11, wherein the scanning step further comprises the steps of:

fingerprinting an applicant on a fingerprint card, wherein the fingerprint includes biometric data; and

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scanning the fingerprint card, thereby digitizing the biometric data.

13. The method of claim 12, further comprising the steps of:

20 grading the biometric data based on qualitative standards; and

selecting biometric data based on the grade of the biometric data.

14. The method of claim 11, wherein the scanning step further comprises the step of:

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scanning the retina of an applicant.

15. The method of claim 11, wherein the receipt includes a barcode comprising identification information relating to the applicant, further comprising the step of reading the barcode at the second location.

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16. An apparatus for capturing, transferring and managing demographic and biometric data as part of an authenticated background check on an applicant, comprising:

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a first website comprising a plurality of data entry fields for input of demographic data related to the applicant;

5 a second website for input of identification information related to the applicant wherein the second website comprises a means for correlating the identity of the applicant with demographic data input at the first location using the identification information and automatically completing fields in an electronic biometric form using an encrypted version of the demographic information;

10 a scanner for input of biometric data related to the applicant, the scanner for input of biometric data being situated at the second location;

a processor for associating the demographic data and biometric data related to the applicant; and

15 a network spanning the first location and the second location, whereby the first and second websites, the scanning means, and the processing means are operatively connected.

20 17. The apparatus of claim 16, wherein the means for input of authenticating demographic data comprises a bar code reader operatively connected to the second interface means; and

25 further comprising a fingerprint card, wherein the scanner comprises a pre-qualified desktop scanner for receiving the fingerprint card.