



Federal Bureau of Investigation
Digital Evidence Laboratory

Operational Technology
ERF Building 27958A
Quantico, Virginia 22135

REPORT OF EXAMINATION

To: Anchorage
AN-C-1
Attn:
Date: October 25, 2013
Case ID No.: 306-AN-15642
Lab No.: 120727251 HD

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Reference: Communication dated July 25, 2012

Ref. No.: Serial 256

Title: ISRAEL KEYES;
SAMANTHA TESSLA KOENIG - VICTIM
ET AL

Date specimen received: July 27, 2012

Specimens:

Q177 Western Digital WD2500 Hard Drive, labeled, in part, "DEAN11" and "7/17/12" (Item 1B207)

Request:

Special Agent of the Anchorage Field Office requested through communication dated July 25, 2012 that the Forensic Audio, Video and Image Analysis Unit determine if any of the subjects depicted in files contained on the Q177 hard drive could be matched to missing persons contained in the NamUs database.

Opinions and Conclusions:

FOR INVESTIGATIVE LEAD PURPOSES ONLY: 44 subjects depicted in images contained on the Q177 hard drive were matched to missing persons contained in the NamUs database.



Summary of Examination:

FOR INVESTIGATIVE LEAD PURPOSES ONLY: Face recognition software was used to locate and cluster faces contained in images on the Q177 hard drive and in the National Missing and Unidentified Persons System (NamUs) Missing Persons photo gallery. These faces were then cross matched to determine if any of the subjects contained on the Q177 hard drive were represented in the NamUs gallery. A total of 44 individuals were found to be represented in both datasets.

Details of Examination:

FOR INVESTIGATIVE LEAD PURPOSES ONLY: The Q177 hard drive was imaged to produce a working copy. The working copy was identified as DEHQ177.

Face recognition software was applied to the graphics files on DEHQ177 to locate faces contained therein that would be suitable for processing using automated facial recognition. DEHQ177 contains a total of 911,743 graphics files. A total of 13,299 facial images suitable for processing using automated facial recognition were extracted from DEHQ177. These facial images were then cross-matched to one another to generate clusters of similar-appearing faces. Through this clustering, a total of approximately 3600 actors were identified. These actor files were then manually reviewed to locate subjects for detailed 1-to-N (1-to-many) searching. A total of 520 subjects were identified in this manner for searching against the NamUs Missing Persons gallery described below.

The Office of Justice Programs' National Institute of Justice operates the National Missing and Unidentified Persons System (NamUs). NamUs maintains a Missing Persons Database, which includes photographs of missing persons. Taken as a set, these photographs make up the NamUs Missing Persons photo gallery. A copy of this photo gallery was obtained from NamUs on October 25, 2012 for use in this examination.

The same processing steps described above for DEHQ177 were applied to the NamUs Missing Persons photo gallery. This gallery contains a total of 21,526 files, and a total of 19,186 facial images suitable for processing using automated facial recognition were extracted from this gallery for 1-to-N searching.

Based on the 1-to-N searching of the 520 probe images from the DEHQ177 hard drive, 62 images, representing 44 different individuals, were found to have matches to subjects contained within the NamUs Missing Persons photo gallery. The majority of DEHQ177 images that match to subjects in the NamUs Missing Persons gallery are copies of the images in NamUs (i.e., the same photo), but 6 of the 44 individuals matched to images that are different from the DEHQ177 images. A listing of the 62 matching DEHQ177 image files and their file paths, along with the corresponding

NamUs Missing Person file number ("MP#") and additional identifying information, if available, follows:

MP#898 (NamUs reports "Recovered")

K:\Export1B163Graphics\1\Carved [27635712][1314666].jpeg
K:\Export1B163Graphics\1\Carved [44314624][1754871].jpeg
K:\Export1B163Graphics\1\Carved [55406592][1063805].jpeg
K:\Export1B163Graphics\1\Carved [563343360][2457613].jpeg
K:\Export1B163Graphics\1\Carved [28897280][2277349].jpeg

MP#6024 [REDACTED] Lee County, FL – last seen December 2006)

K:\Export1B163Graphics\1\Carved [80150528][1663573].jpeg

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MP#1984 [REDACTED] San Luis Obispo, CA – last seen May 1996)

K:\Export1B163Graphics\1\Carved [73650176][1663488].jpeg

MP#1963 [REDACTED] Mahoning County, OH – last seen August 2006)

K:\Export1B163Graphics\1\Carved [0][475147].jpeg
K:\Export1B163Graphics\1\image_large[5][173678].jpg
K:\Export1B163Graphics\1\{2E176CAB-A5F2-4D7F-AF6A-DF50D61006E6}[61140]

MP#2316 [REDACTED] Cleveland County, NC – last seen February 2000)

K:\Export1B163Graphics\1\Carved [2729525248][1861938].jpeg
K:\Export1B163Graphics\1\Carved [2729713664][1861943].jpeg

MP#4009 [REDACTED] Berrien County, Michigan – last seen February 2001)

K:\Export1B163Graphics\1\Carved [78491648][1663553].jpeg
K:\Export1B163Graphics\1\Carved [78487552][1663552].jpeg

MP#3998 [REDACTED] Lake County, FL – last seen August 2006)

K:\Export1B163Graphics\1\image_large[3][178573].jpg
K:\Export1B163Graphics\1\Carved [0][475146].jpeg
K:\Export1B163Graphics\1\{ED2CD593-76FE-4F0D-AA34-9361DAFD0C76}[61141]

MP#12461 [REDACTED] Lewis County, WV – last seen September 2011)

K:\Export1B163Graphics\1\Carved [62521344][1663367].jpeg

MP#4015 [REDACTED] San Francisco County, CA – last seen June 1997)

K:\Export1B163Graphics\1\image_large[3][430675].jpg
K:\Export1B163Graphics\1\Carved [0][1717899].jpeg

MP#6154 [REDACTED] Riverside County, CA – last seen July 2005)

K:\Export1B163Graphics\1\Carved [51712000][1663186].jpeg

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MP#1687 () Cuyahoga County, OH – last seen July 2007)
K:\Export1B163Graphics\1\Carved [1218715648][758887].jpeg
K:\Export1B163Graphics\1\Carved [1238835200][1030696].jpeg

MP#4241 & 5407 (NAMUS reports case has been resolved and archived)
K:\Export1B163Graphics\1\Carved [2001133568][1032861].jpeg

MP#11677 & 11678 (William and Lorraine Currier, Essex, VT – last seen June 2011)
K:\Export1B163Graphics\1\Carved [194859008][1576242].jpeg
K:\Export1B163Graphics\1\Carved [203362304][1359317].jpeg

MP#10305 () Decatur County, TN – last seen April 2011)
K:\Export1B163Graphics\1\Carved [2741764096][1862097].jpeg

MP#3071 () Milwaukee County, WI – last seen May 2002)
K:\Export1B163Graphics\1\Carved [71192576][1663440].jpeg

MP#2753 () Ward County, ND – last seen May 2006)
K:\Export1B163Graphics\1\Carved [66650112][1663415].jpeg

MP#4027 () Will County, IL – last seen April 2007)
K:\Export1B163Graphics\1\Carved [63524864][1663380].jpeg

MP#4028 () Puerto Rico County, PR – last seen July 1999)
K:\Export1B163Graphics\1\Carved [2750840832][1862266].jpeg

MP#4243 () Delaware County, OH – last seen July 2005)
K:\Export1B163Graphics\1\Carved [2749468672][1862235].jpeg

MP#2688 () Baldwin County, AL – last seen June 1959)
K:\Export1B163Graphics\1\Carved [2749452288][1862234].jpeg

MP#5696 () Gwinnett County, GA – last seen November 2007)
K:\Export1B163Graphics\1\Carved [2743062528][1862115].jpeg

MP#3997 () Beaver County, PA – last seen March 2007)
K:\Export1B163Graphics\1\Carved [2743222272][1862121].jpeg

MP#924 () Williamson County, TX – last seen January 2002)
K:\Export1B163Graphics\1\Carved [2741714944][1862096].jpeg

MP#49 [redacted] Alameda County, CA – last seen November 1988)
K:\Export1B163Graphics\1\Carved [2740633600][1862072].jpeg

MP#12932 [redacted] Lee County, FL – last seen October 2007)
K:\Export1B163Graphics\1\Carved [2739658752][1862058].jpeg

MP#4238 [redacted] Jackson County, TN – last seen March 2001)
K:\Export1B163Graphics\1\Carved [2001149952][1032862].jpeg

MP#1987 [redacted] Maury County, TN – last seen April 2004)
K:\Export1B163Graphics\1\Carved [1829830656][1017382].jpeg

MP#13744 (NAMUS reports case has been resolved and archived)
K:\Export1B163Graphics\1\Carved [1515716608][1586691].jpeg
K:\Export1B163Graphics\1\Carved [8118272][580499].jpeg

MP#14930 [redacted] Richland County, SC – last seen December 2011)
K:\Export1B163Graphics\1\Carved [1488904192][1586369].jpeg

MP#5239 [redacted] Langdale County, WI – last seen August 2009)
K:\Export1B163Graphics\1\Carved [1488793600][1586367].jpeg

MP#2542 [redacted] Grays Harbor County, WA – last seen June 2009)
K:\Export1B163Graphics\1\Carved [72749056][1663475].jpeg

MP#344 [redacted] Jefferson County, CO – last seen February 2003)
K:\Export1B163Graphics\1\Carved [71835648][1663457].jpeg

MP#4240 [redacted] Multnomah County, OR – last seen April 2001)
K:\Export1B163Graphics\1\Carved [71700480][1663452].jpeg

MP#4037 [redacted] Clark County, WA – last seen April 2007)
K:\Export1B163Graphics\1\Carved [71647232][1663449].jpeg

MP#3968 [redacted] Philadelphia County, PA – last seen February 2005)
K:\Export1B163Graphics\1\Carved [71389184][1663444].jpeg

MP#4242 [redacted] Lincoln County, Missouri – last seen March 2005)
K:\Export1B163Graphics\1\Carved [71278592][1663442].jpeg

MP#5549 [redacted] Washington County, NY – last seen November 2007)
K:\Export1B163Graphics\1\Carved [2743205888][1862120].jpeg

MP#2 [REDACTED] Albany County, NY – last seen March 1998)
K:\Export1B163Graphics\1\Carved [1567657984][1586869].jpeg

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MP#1982 [REDACTED] Centre County, PA – last seen April 2005)
K:\Export1B163Graphics\1\Carved [2741702656][1862095].jpeg

MP#1244 [REDACTED] Essex County, NJ – last seen February 2006)
K:\Export1B163Graphics\1\Carved [2740621312][1862071].jpeg

MP#1056 [REDACTED] Cass County, Missouri – last seen May 2007)
K:\Export1B163Graphics\1\Carved [2743046144][1862114].jpeg

MP#806 [REDACTED] Philadelphia County, PA – last seen February 2005)
K:\Export1B163Graphics\1\Carved [62607360][1663369].jpeg

MP#4890 [REDACTED] Salt Lake County, UT – last seen December 2009)
K:\Export1B163Graphics\1\Carved [30433280][1314706].jpeg
K:\Export1B163Graphics\1\Carved [566157312][2457654].jpeg
K:\Export1B163Graphics\1\Carved [58204160][1063857].jpeg
K:\Export1B163Graphics\1\Carved [31727616][2277374].jpeg
K:\Export1B163Graphics\1\Carved [47128576][1754912].jpeg
K:\Export1B163Graphics\1\Carved [98263040][1320575].jpeg

Following the processing and analysis described above, a separate face recognition software application was applied to cross-match all of the facial images extracted from DEHQ177 against all of the NamUs Missing Persons facial images. No additional missing person images were located in the DEHQ177 data using this second application.

A working copy of Q177 was generated at DEHQ177. In addition, a document that summarizes these results and contains copies of the images from DEHQ177 and the corresponding images from the NamUs Missing Persons photo gallery was produced and identified as DE1.

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Disposition of Evidence:

The Q177, DEHQ177, and DE1 specimens are being returned to the Anchorage Field Office under separate cover via FedEx.

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Examiner:

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Operational Technology Division
Forensic Audio, Video and Image Analysis Unit