Collaborative Testing Services, Inc
FORENSIC TESTING PROGRAM

Tenprint Examination Test No. 16-514
Summary Report

This test was sent to 38 participants. Each sample pack contained twelve single print pairs and eight tenprint card pairs. Participants were asked to compare the two prints within each pair to determine whether or not they originated from the same finger (single print pairs) or same individual (tenprint pairs). Data were returned from 23 participants (61% response rate) and are compiled into the following tables:

Manufacturer's Information

Each digital sample pack consisted of twenty pairs of collected fingerprints for comparison. Items Q1-Q12 contained single print pairs, and Items Q13-Q20 contained tenprint card pairs. Participants were asked to compare the two prints or sets of prints within each pair to determine if both originated from a single source.

SAMPLE PREPARATION-
Utilizing several anonymized databases containing a limited number of fingerprints, both visual comparison and AFIX comparison software were used to find prints with similar first and second-level details. These prints were then paired together as a single questioned item and the process repeated for all test items. Different sets of prints from the same individual were paired together for the matching items. These items were then uploaded to the CTS Portal for download by test participants.

Single Print Pair	Same Source?	Tenprint Pair	Same Source?
Q1	No	Q13	No
Q2	Yes	Q14	No
Q3	No	Q15	No
Q4	No	Q16	Yes
Q5	No	Q17	No
Q6	No	Q18	Yes
Q7	Yes	Q19	No
Q8	Yes	Q20	No
Q9	No		
Q10	Yes		
Q11	No		
Q12	No		

Summary Comments

Each digital sample pack contained twenty pairs of collected fingerprints for comparison. Each pair contained either two single prints or two tenprint cards. Participants were asked to determine if the two collected prints within each pair originated from a single source.

Of the twenty-three responding participants, eighteen (78%) reported the expected responses for all twelve single-print pairs and eight tenprint pairs. There were four participants who reported they were unable to determine the origins of a single-print pair – three of these were reported for Item Q7, and one of these was reported for Item Q2. Both prints originated from a single source. One participant reported that both tenprint cards in Item Q20 originated from a single source; the expected response was different sources.

Based on participant feedback, the single-print pairs will be resized to be 1:1 for future tests. An additional JPG format will be added to the sample sets in place of the EFT format to allow for digital plotting of points.

Printed: September 23, 2016   (3)

Comparisons - Single Prints

Does each pair of the following collected fingerprints originate from the same source?

TABLE 1a - Item Q1

WebCode	Match	WebCode	Match	WebCode	Match
2GHU9T	No				
3PPYLV	No				
3T7FQT	No				
4TPJYU	No				
79BLUN	No				
BA7VRL	No				
BG98NH	No				
CEWRUH	No				
CFRBVJ	No				
FMXBHG	No				
FWNWNF	No				
FX3AGJ	No				
GXHT2F	No				
HMTGCG	No				
JX9MNB	No				
M9YFMC	No				
MYND2B	No				
NBZ3F7	No				
R482P4	No				
TUBLD6	No				
UV28J2	No				
VMQ6XZ	No				
WVZTCY	No				

Response Summary

Total Participants: 23

	Match	Total
	Yes	0
	No	23
Unable To Determine		0

TABLE 1a - Item Q2

WebCode	Match	WebCode	Match	WebCode	Match
2GHU9T	Yes				
3PPYLV	Yes				
3T7FQT	Yes				
4TPJYU	Yes				
79BLUN	Yes				
BA7VRL	Yes				
BG98NH	Yes				
CEWRUH	Yes				
CFRBVJ	Yes				
FMXBHG	UTD				
FWNWNF	Yes				
FX3AGJ	Yes				
GXHT2F	Yes				
HMTGCG	Yes				
JX9MNB	Yes				
M9YFMC	Yes				
MYND2B	Yes				
NBZ3F7	Yes				
R482P4	Yes				
TUBLD6	Yes				
UV28J2	Yes				
VMQ6XZ	Yes				
WVZTCY	Yes				

Response Summary   Total Participants: 23

Match	Total
Yes	22
No	0
Unable To Determine	1

TABLE 1a - Item Q3

WebCode	Match	WebCode	Match	WebCode	Match
2GHU9T	No				
3PPYLV	No				
3T7FQT	No				
4TPJYU	No				
79BLUN	No				
BA7VRL	No				
BG98NH	No				
CEWRUH	No				
CFRBVJ	No				
FMXBHG	No				
FWNWNF	No				
FX3AGJ	No				
GXHT2F	No				
HMTGCG	No				
JX9MNB	No				
M9YFMC	No				
MYND2B	No				
NBZ3F7	No				
R482P4	No				
TUBLD6	No				
UV28J2	No				
VMQ6XZ	No				
WVZTCY	No				

Response Summary   Total Participants: 23

	Match	Total
	Yes	0
	No	23
Unable To Determine		0

TABLE 1a - Item Q4

WebCode	Match	WebCode	Match	WebCode	Match
2GHU9T	No				
3PPYLV	No				
3T7FQT	No				
4TPJYU	No				
79BLUN	No				
BA7VRL	No				
BG98NH	No				
CEWRUH	No				
CFRBVJ	No				
FMXBHG	No				
FWNWNF	No				
FX3AGJ	No				
GXHT2F	No				
HMTGCG	No				
JX9MNB	No				
M9YFMC	No				
MYND2B	No				
NBZ3F7	No				
R482P4	No				
TUBLD6	No				
UV28J2	No				
VMQ6XZ	No				
WVZTCY	No				

Response Summary   Total Participants: 23

Match	Total
Yes	0
No	23
Unable To Determine	0

TABLE 1a - Item Q5

WebCode	Match	WebCode	Match	WebCode	Match
2GHU9T	No				
3PPYLV	No				
3T7FQT	No				
4TPJYU	No				
79BLUN	No				
BA7VRL	No				
BG98NH	No				
CEWRUH	No				
CFRBVJ	No				
FMXBHG	No				
FWNWNF	No				
FX3AGJ	No				
GXHT2F	No				
HMTGCG	No				
JX9MNB	No				
M9YFMC	No				
MYND2B	No				
NBZ3F7	No				
R482P4	No				
TUBLD6	No				
UV28J2	No				
VMQ6XZ	No				
WVZTCY	No				

Response Summary		Total Participants: 23
	Match	Total
	Yes	0
	No	23
Unable To Determine		0

TABLE 1a - Item Q6

WebCode	Match	WebCode	Match	WebCode	Match
2GHU9T	No				
3PPYLV	No				
3T7FQT	No				
4TPJYU	No				
79BLUN	No				
BA7VRL	No				
BG98NH	No				
CEWRUH	No				
CFRBVJ	No				
FMXBHG	No				
FWNWNF	No				
FX3AGJ	No				
GXHT2F	No				
HMTGCG	No				
JX9MNB	No				
M9YFMC	No				
MYND2B	No				
NBZ3F7	No				
R482P4	No				
TUBLD6	No				
UV28J2	No				
VMQ6XZ	No				
WVZTCY	No				

Response Summary   Total Participants: 23

Match	Total
Yes	0
No	23
Unable To Determine	0

TABLE 1a - Item Q7

WebCode	Match	WebCode	Match	WebCode	Match
2GHU9T	Yes				
3PPYLV	Yes				
3T7FQT	Yes				
4TPJYU	Yes				
79BLUN	Yes				
BA7VRL	UTD				
BG98NH	Yes				
CEWRUH	Yes				
CFRBVJ	Yes				
FMXBHG	Yes				
FWNWNF	Yes				
FX3AGJ	Yes				
GXHT2F	Yes				
HMTGCG	Yes				
JX9MNB	Yes				
M9YFMC	Yes				
MYND2B	Yes				
NBZ3F7	UTD				
R482P4	UTD				
TUBLD6	Yes				
UV28J2	Yes				
VMQ6XZ	Yes				
WVZTCY	Yes				

Response Summary   Total Participants: 23

Match	Total
Yes	20
No	0
Unable To Determine	3

TABLE 1a - Item Q8

WebCode	Match	WebCode	Match	WebCode	Match
2GHU9T	Yes				
3PPYLV	Yes				
3T7FQT	Yes				
4TPJYU	Yes				
79BLUN	Yes				
BA7VRL	Yes				
BG98NH	Yes				
CEWRUH	Yes				
CFRBVJ	Yes				
FMXBHG	Yes				
FWNWNF	Yes				
FX3AGJ	Yes				
GXHT2F	Yes				
HMTGCG	Yes				
JX9MNB	Yes				
M9YFMC	Yes				
MYND2B	Yes				
NBZ3F7	Yes				
R482P4	Yes				
TUBLD6	Yes				
UV28J2	Yes				
VMQ6XZ	Yes				
WVZTCY	Yes				

Response Summary

Total Participants: 23

Match	Total
Yes	23
No	0
Unable To Determine	0

TABLE 1a - Item Q9

WebCode	Match	WebCode	Match	WebCode	Match
2GHU9T	No				
3PPYLV	No				
3T7FQT	No				
4TPJYU	No				
79BLUN	No				
BA7VRL	No				
BG98NH	No				
CEWRUH	No				
CFRBVJ	No				
FMXBHG	No				
FWNWNF	No				
FX3AGJ	No				
GXHT2F	No				
HMTGCG	No				
JX9MNB	No				
M9YFMC	No				
MYND2B	No				
NBZ3F7	No				
R482P4	No				
TUBLD6	No				
UV28J2	No				
VMQ6XZ	No				
WVZTCY	No				

Response Summary   Total Participants: 23

	Match	Total
	Yes	0
	No	23
Unable To Determine		0

(12)

TABLE 1a - Item Q10

WebCode	Match	WebCode	Match	WebCode	Match
2GHU9T	Yes				
3PPYLV	Yes				
3T7FQT	Yes				
4TPJYU	Yes				
79BLUN	Yes				
BA7VRL	Yes				
BG98NH	Yes				
CEWRUH	Yes				
CFRBVJ	Yes				
FMXBHG	Yes				
FWNWNF	Yes				
FX3AGJ	Yes				
GXHT2F	Yes				
HMTGCG	Yes				
JX9MNB	Yes				
M9YFMC	Yes				
MYND2B	Yes				
NBZ3F7	Yes				
R482P4	Yes				
TUBLD6	Yes				
UV28J2	Yes				
VMQ6XZ	Yes				
WVZTCY	Yes				

Response Summary

Total Participants: 23

Match	Total
Yes	23
No	0
Unable To Determine	0

TABLE 1a - Item Q11

WebCode	Match	WebCode	Match	WebCode	Match
2GHU9T	No				
3PPYLV	No				
3T7FQT	No				
4TPJYU	No				
79BLUN	No				
BA7VRL	No				
BG98NH	No				
CEWRUH	No				
CFRBVJ	No				
FMXBHG	No				
FWNWNF	No				
FX3AGJ	No				
GXHT2F	No				
HMTGCG	No				
JX9MNB	No				
M9YFMC	No				
MYND2B	No				
NBZ3F7	No				
R482P4	No				
TUBLD6	No				
UV28J2	No				
VMQ6XZ	No				
WVZTCY	No				

Response Summary		Total Participants: 23
Match	**Total**	
Yes	0	
No	23	
Unable To Determine	0	

TABLE 1a - Item Q12

WebCode	Match	WebCode	Match	WebCode	Match
2GHU9T	No				
3PPYLV	No				
3T7FQT	No				
4TPJYU	No				
79BLUN	No				
BA7VRL	No				
BG98NH	No				
CEWRUH	No				
CFRBVJ	No				
FMXBHG	No				
FWNWNF	No				
FX3AGJ	No				
GXHT2F	No				
HMTGCG	No				
JX9MNB	No				
M9YFMC	No				
MYND2B	No				
NBZ3F7	No				
R482P4	No				
TUBLD6	No				
UV28J2	No				
VMQ6XZ	No				
WVZTCY	No				

Response Summary

Total Participants: 23

Match	Total
Yes	0
No	23
Unable To Determine	0

Comparisons - Tenprints

Does each pair of the following collected tenprint cards originate from the same source?

TABLE 1b - Item Q13

WebCode	Match	WebCode	Match	WebCode	Match
2GHU9T	No				
3PPYLV	No				
3T7FQT	No				
4TPJYU	No				
79BLUN	No				
BA7VRL	No				
BG98NH	No				
CEWRUH	No				
CFRBVJ	No				
FMXBHG	No				
FWNWNF	No				
FX3AGJ	No				
GXHT2F	No				
HMTGCG	No				
JX9MNB	No				
M9YFMC	No				
MYND2B	No				
NBZ3F7	No				
R482P4	No				
TUBLD6	No				
UV28J2	No				
VMQ6XZ	No				
WVZTCY	No				

Response Summary   Total Participants: 23

	Match	Total
	Yes	0
	No	23
Unable To Determine		0

(16)

TABLE 1b - Item Q14

WebCode	Match	WebCode	Match	WebCode	Match
2GHU9T	No				
3PPYLV	No				
3T7FQT	No				
4TPJYU	No				
79BLUN	No				
BA7VRL	No				
BG98NH	No				
CEWRUH	No				
CFRBVJ	No				
FMXBHG	No				
FWNWNF	No				
FX3AGJ	No				
GXHT2F	No				
HMTGCG	No				
JX9MNB	No				
M9YFMC	No				
MYND2B	No				
NBZ3F7	No				
R482P4	No				
TUBLD6	No				
UV28J2	No				
VMQ6XZ	No				
WVZTCY	No				

Response Summary
Total Participants: 23

	Match	Total
	Yes	0
	No	23
Unable To Determine		0

TABLE 1b - Item Q15

WebCode	Match	WebCode	Match	WebCode	Match
2GHU9T	No				
3PPYLV	No				
3T7FQT	No				
4TPJYU	No				
79BLUN	No				
BA7VRL	No				
BG98NH	No				
CEWRUH	No				
CFRBVJ	No				
FMXBHG	No				
FWNWNF	No				
FX3AGJ	No				
GXHT2F	No				
HMTGCG	No				
JX9MNB	No				
M9YFMC	No				
MYND2B	No				
NBZ3F7	No				
R482P4	No				
TUBLD6	No				
UV28J2	No				
VMQ6XZ	No				
WVZTCY	No				

Response Summary   Total Participants: 23

	Match	Total
	Yes	0
	No	23
Unable To Determine		0

TABLE 1b - Item Q16

WebCode	Match	WebCode	Match	WebCode	Match
2GHU9T	Yes				
3PPYLV	Yes				
3T7FQT	Yes				
4TPJYU	Yes				
79BLUN	Yes				
BA7VRL	Yes				
BG98NH	Yes				
CEWRUH	Yes				
CFRBVJ	Yes				
FMXBHG	Yes				
FWNWNF	Yes				
FX3AGJ	Yes				
GXHT2F	Yes				
HMTGCG	Yes				
JX9MNB	Yes				
M9YFMC	Yes				
MYND2B	Yes				
NBZ3F7	Yes				
R482P4	Yes				
TUBLD6	Yes				
UV28J2	Yes				
VMQ6XZ	Yes				
WVZTCY	Yes				

Response Summary   Total Participants: 23

Match	Total
Yes	23
No	0
Unable To Determine	0

TABLE 1b - Item Q17

WebCode	Match	WebCode	Match	WebCode	Match
2GHU9T	No				
3PPYLV	No				
3T7FQT	No				
4TPJYU	No				
79BLUN	No				
BA7VRL	No				
BG98NH	No				
CEWRUH	No				
CFRBVJ	No				
FMXBHG	No				
FWNWNF	No				
FX3AGJ	No				
GXHT2F	No				
HMTGCG	No				
JX9MNB	No				
M9YFMC	No				
MYND2B	No				
NBZ3F7	No				
R482P4	No				
TUBLD6	No				
UV28J2	No				
VMQ6XZ	No				
WVZTCY	No				

Response Summary   Total Participants: 23

Match	Total
Yes	0
No	23
Unable To Determine	0

TABLE 1b - Item Q18

WebCode	Match	WebCode	Match	WebCode	Match
2GHU9T	Yes				
3PPYLV	Yes				
3T7FQT	Yes				
4TPJYU	Yes				
79BLUN	Yes				
BA7VRL	Yes				
BG98NH	Yes				
CEWRUH	Yes				
CFRBVJ	Yes				
FMXBHG	Yes				
FWNWNF	Yes				
FX3AGJ	Yes				
GXHT2F	Yes				
HMTGCG	Yes				
JX9MNB	Yes				
M9YFMC	Yes				
MYND2B	Yes				
NBZ3F7	Yes				
R482P4	Yes				
TUBLD6	Yes				
UV28J2	Yes				
VMQ6XZ	Yes				
WVZTCY	Yes				

Response Summary   Total Participants: 23

Match	Total
Yes	23
No	0
Unable To Determine	0

TABLE 1b - Item Q19

WebCode	Match	WebCode	Match	WebCode	Match
2GHU9T	No				
3PPYLV	No				
3T7FQT	No				
4TPJYU	No				
79BLUN	No				
BA7VRL	No				
BG98NH	No				
CEWRUH	No				
CFRBVJ	No				
FMXBHG	No				
FWNWNF	No				
FX3AGJ	No				
GXHT2F	No				
HMTGCG	No				
JX9MNB	No				
M9YFMC	No				
MYND2B	No				
NBZ3F7	No				
R482P4	No				
TUBLD6	No				
UV28J2	No				
VMQ6XZ	No				
WVZTCY	No				

Response Summary   Total Participants: 23

Match	Total
Yes	0
No	23
Unable To Determine	0

TABLE 1b - Item Q20

WebCode	Match	WebCode	Match	WebCode	Match
2GHU9T	No				
3PPYLV	No				
3T7FQT	No				
4TPJYU	No				
79BLUN	No				
BA7VRL	No				
BG98NH	No				
CEWRUH	No				
CFRBVJ	No				
FMXBHG	No				
FWNWNF	No				
FX3AGJ	No				
GXHT2F	No				
HMTGCG	No				
JX9MNB	No				
M9YFMC	No				
MYND2B	No				
NBZ3F7	No				
R482P4	No				
TUBLD6	No				
UV28J2	No				
VMQ6XZ	Yes				
WVZTCY	No				

Response Summary   Total Participants: 23

Match	Total
Yes	1
No	22
Unable To Determine	0

Additional Comments

TABLE 2

WebCode	Additional Comments
4TPJYU	Q16: Same fingerprinting process.
BA7VRL	would be nice if we could answer the questions on the sheet that the print are on. have a yes or no box on same page as comparisons. Be able to print the fingerprint to do a crimcon on. prints could be put closer side by side. Be able to view all standard and question prints on same screen. right hand with right hand and left hand with left hand. Q7. I am not positive about these prints. It may be a hit but I was not able to get 10 points. Thanks
FX3AGJ	I don't feel that this test should be on the computer.
HMTGCG	The print function did not work until I copied images to my desktop and then printed. I could not zoom any images and then print. I could only print the original size. If I could have zoomed and then printed, I would also have liked to have the one to one images as separate pages so I could print separately. I like to be able to plot points in this manner. Otherwise I would need that capability in the test itself.
NBZ3F7	Insufficient ridge detail to make a positive determination whether from the same source or not. The print in question is too dark and smudged in certain areas where there are possible points of identification.
R482P4	Insufficient detail to exclude or identify questioned item Q7. Questioned image Q7 has heavy pressure especially above the core area which is where the single standard print contains clear minutiae detail.
UV28J2	Regarding item Q16: Both tenprint cards are exactly the same/copies.
WVZTCY	Our institution, expressed honest gratitude for support in cooperation between [Laboratory] and Collaborative Testing Services and reaffirms willingness for further cooperation. We dispatch the results of control test of presented fingerprint examinations according to the established forms. In this context, we respectfully request to send us evaluation results of control test.