

Participant Results

Proprietary Fingerprint Template Evaluation II (PFT-II)

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1 1K Sample Evaluation

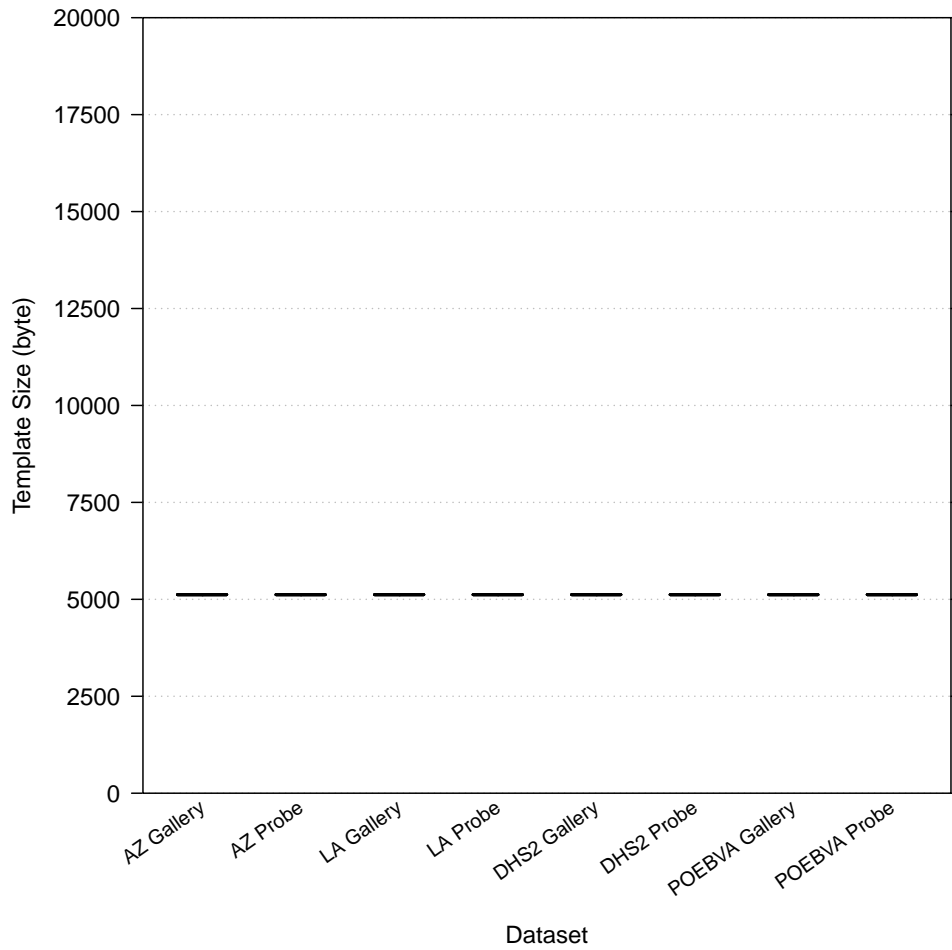


Figure 1: 1K Sample Evaluation – Template Size Distribution

	AZ		LA		DHS2		POEBVA	
	Gallery	Probe	Gallery	Probe	Gallery	Probe	Gallery	Probe
<i>Dimensions</i>	800x800	800x800	412x1000	400x776	368x368	368x368	500x500	368x368
<i>Maximum</i>	5120	5120	5120	5120	5120	5120	5120	5120
75%	5120	5120	5120	5120	5120	5120	5120	5120
<i>Median</i>	5120	5120	5120	5120	5120	5120	5120	5120
25%	5120	5120	5120	5120	5120	5120	5120	5120
<i>Minimum</i>	5120	5120	5120	5120	5120	5120	5120	5120

Table 1: Sample Dataset — Template Size Distribution

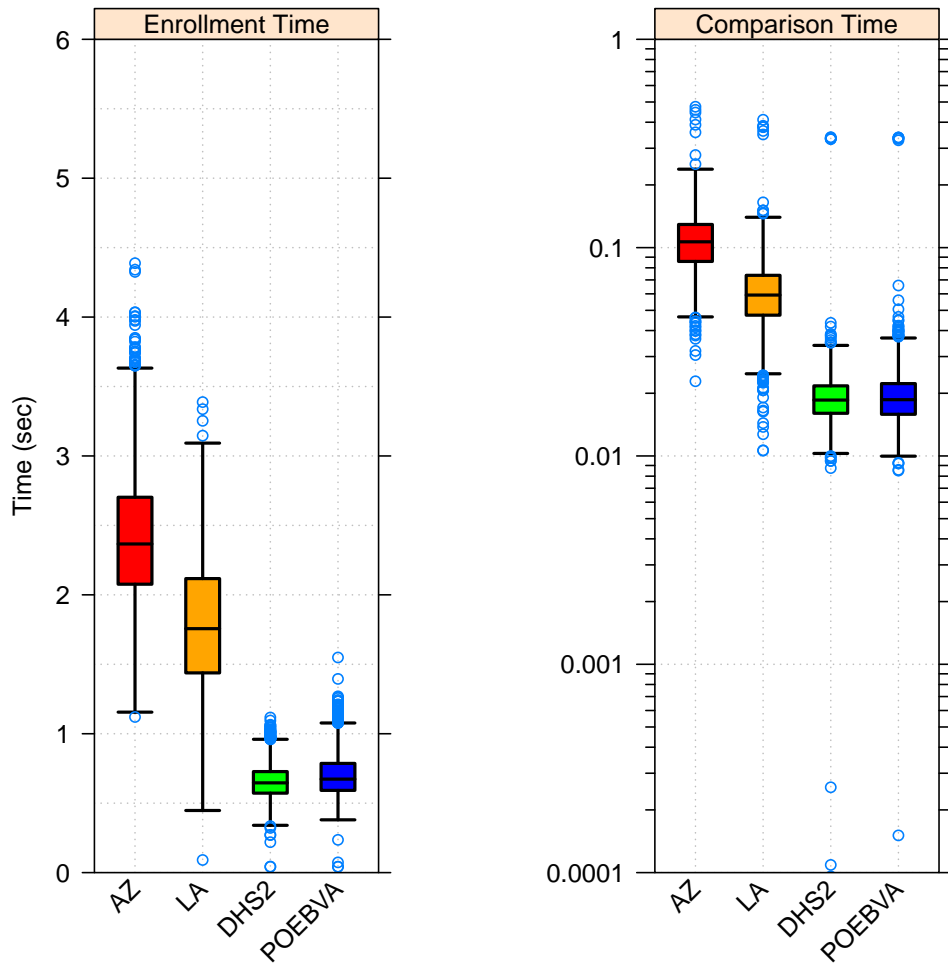


Figure 2: 1K Sample Evaluation – Enrollment and Comparison Timing

	AZ	LA	DHS2	POEBVA
<i>Maximum</i>	4.388	3.388	1.117	1.550
<i>75%</i>	2.703	2.117	0.727	0.786
<i>Median</i>	2.366	1.756	0.646	0.673
<i>25%</i>	2.077	1.438	0.572	0.592
<i>Minimum</i>	1.121	0.091	0.042	0.043

Table 2: Enrollment Times (sec)

	AZ	LA	DHS2	POEBVA
<i>Maximum</i>	0.475	0.411	0.339	0.338
<i>75%</i>	0.129	0.074	0.022	0.022
<i>Median</i>	0.107	0.059	0.019	0.019
<i>25%</i>	0.086	0.047	0.016	0.016
<i>Minimum</i>	0.023	0.000	0.000	0.000

Table 3: Comparison Times (sec)

2 Full Evaluation

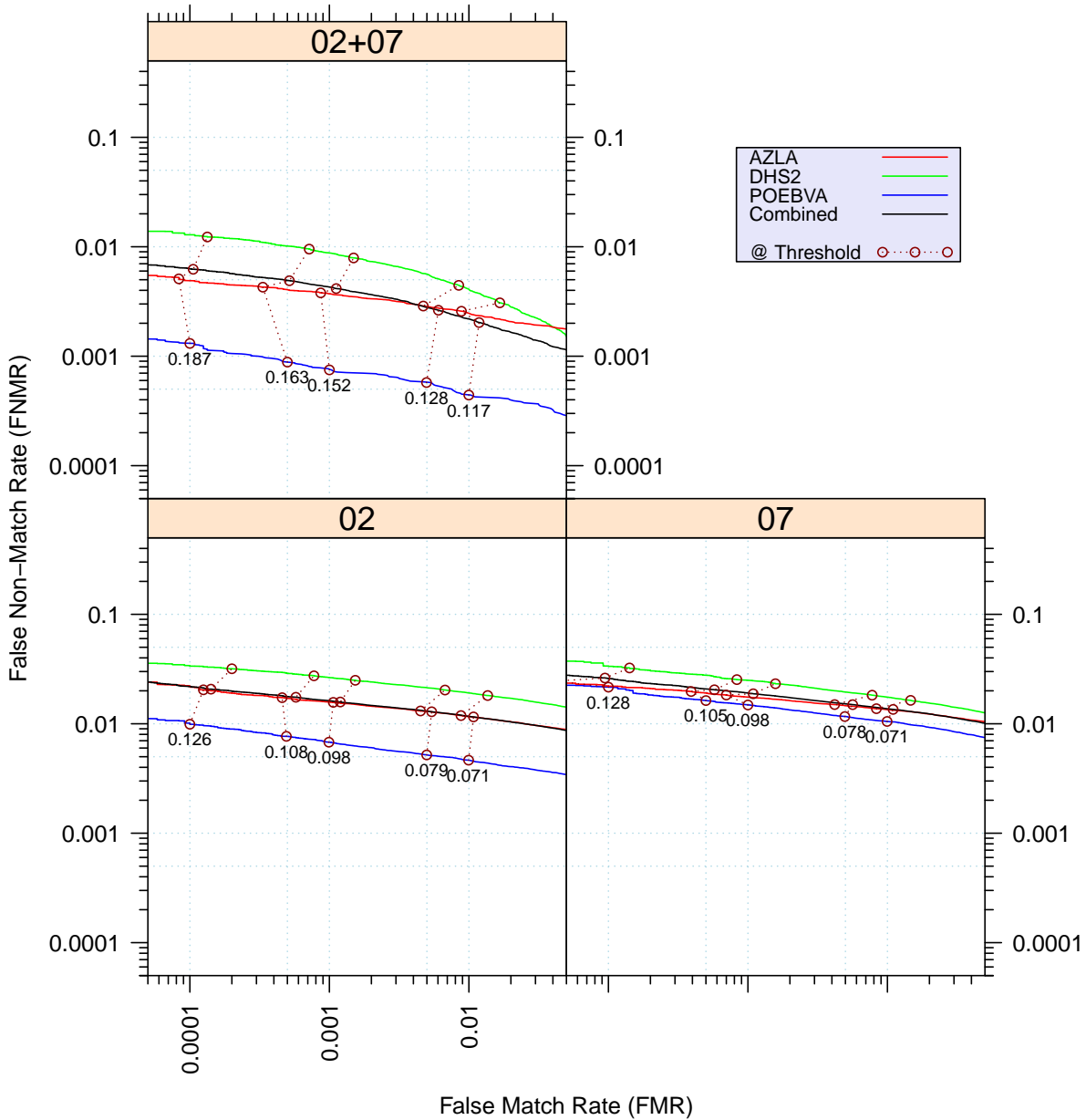


Figure 3: Full Evaluation – DET for POEBVA, DHS2, AZLA, and combined from R Index, L Index, and R/L Index

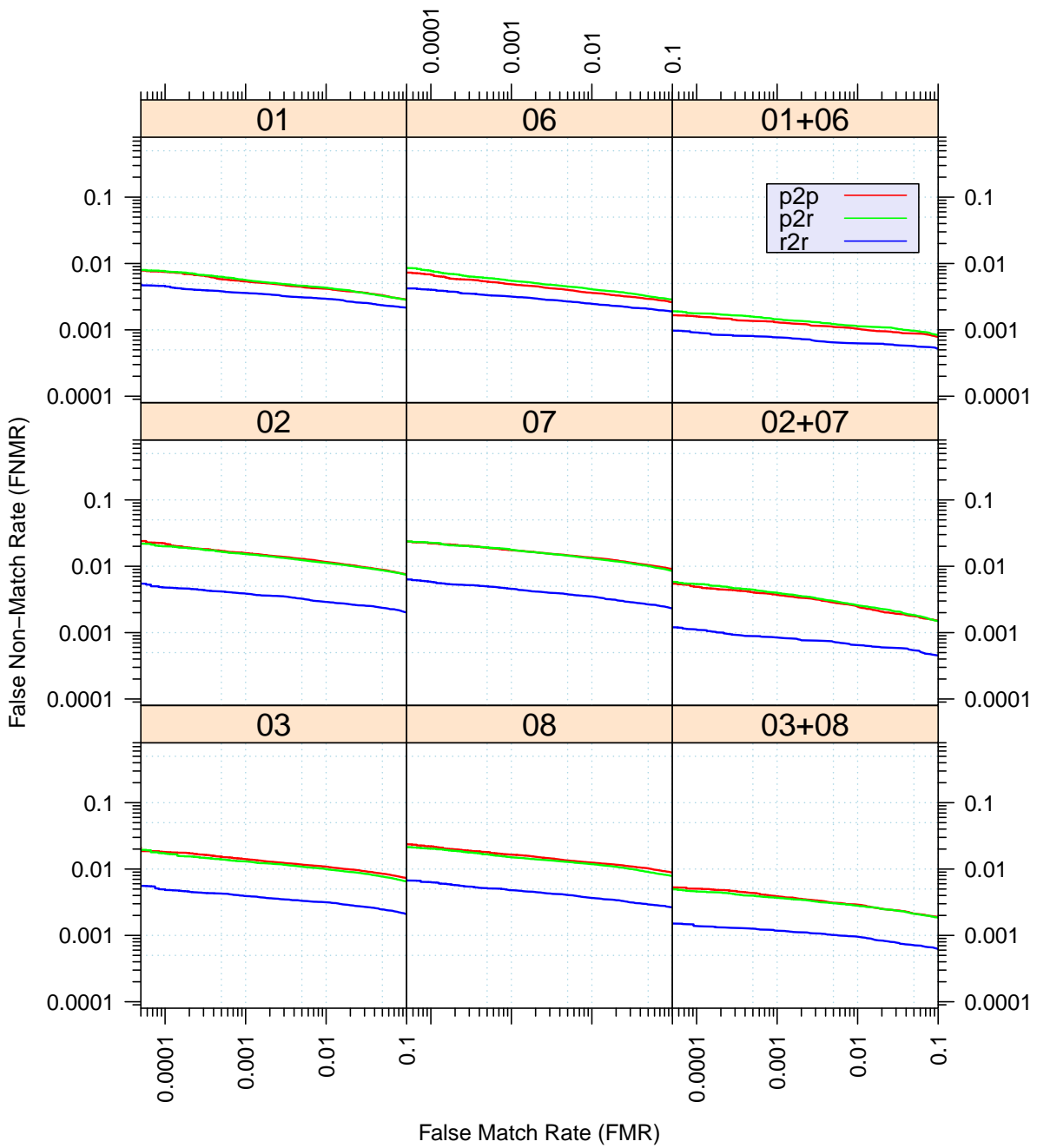


Figure 4: Full Evaluation – DET for all finger positions from AZLA

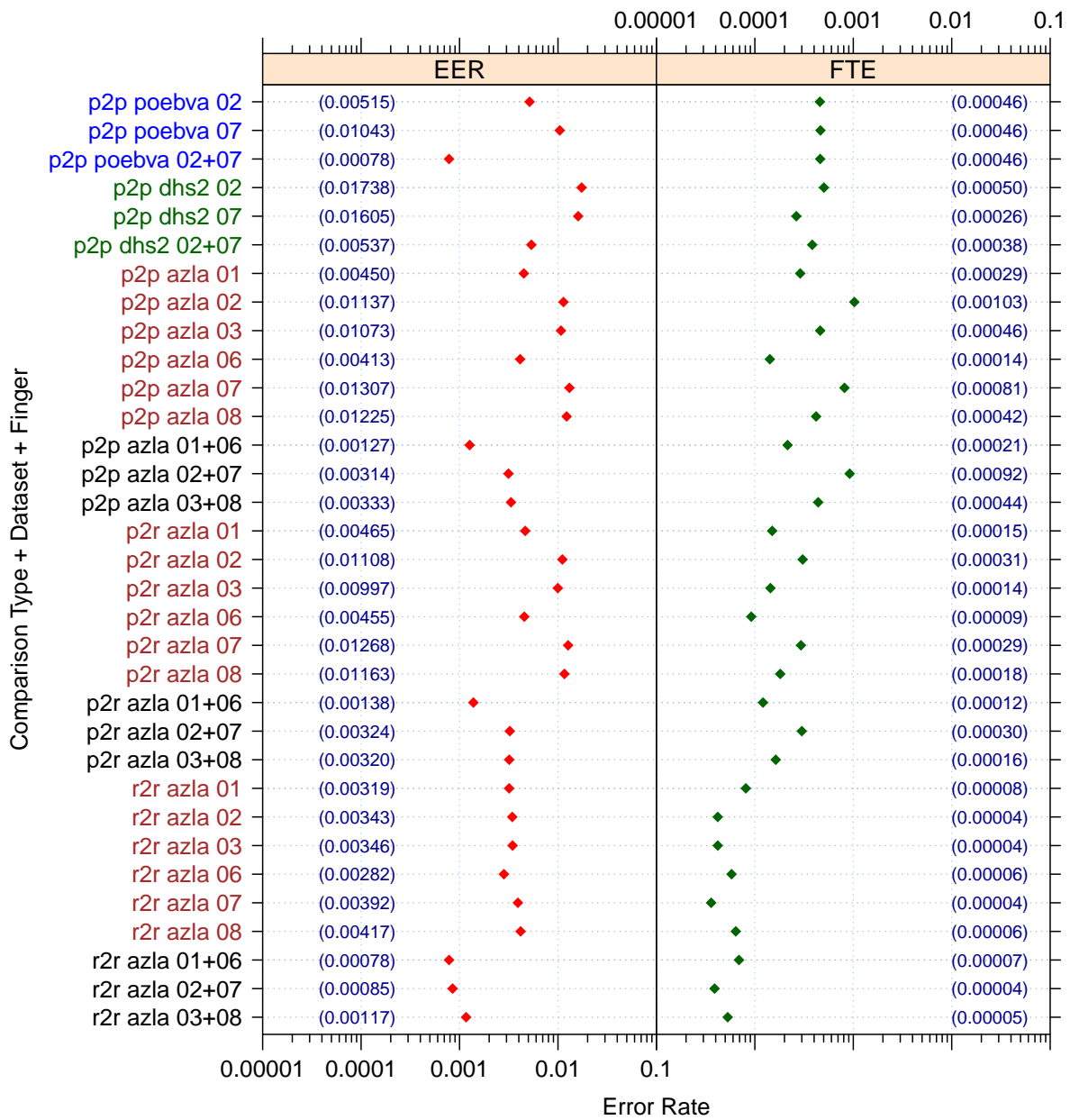


Figure 5: Full Evaluation – EERs and FTEs

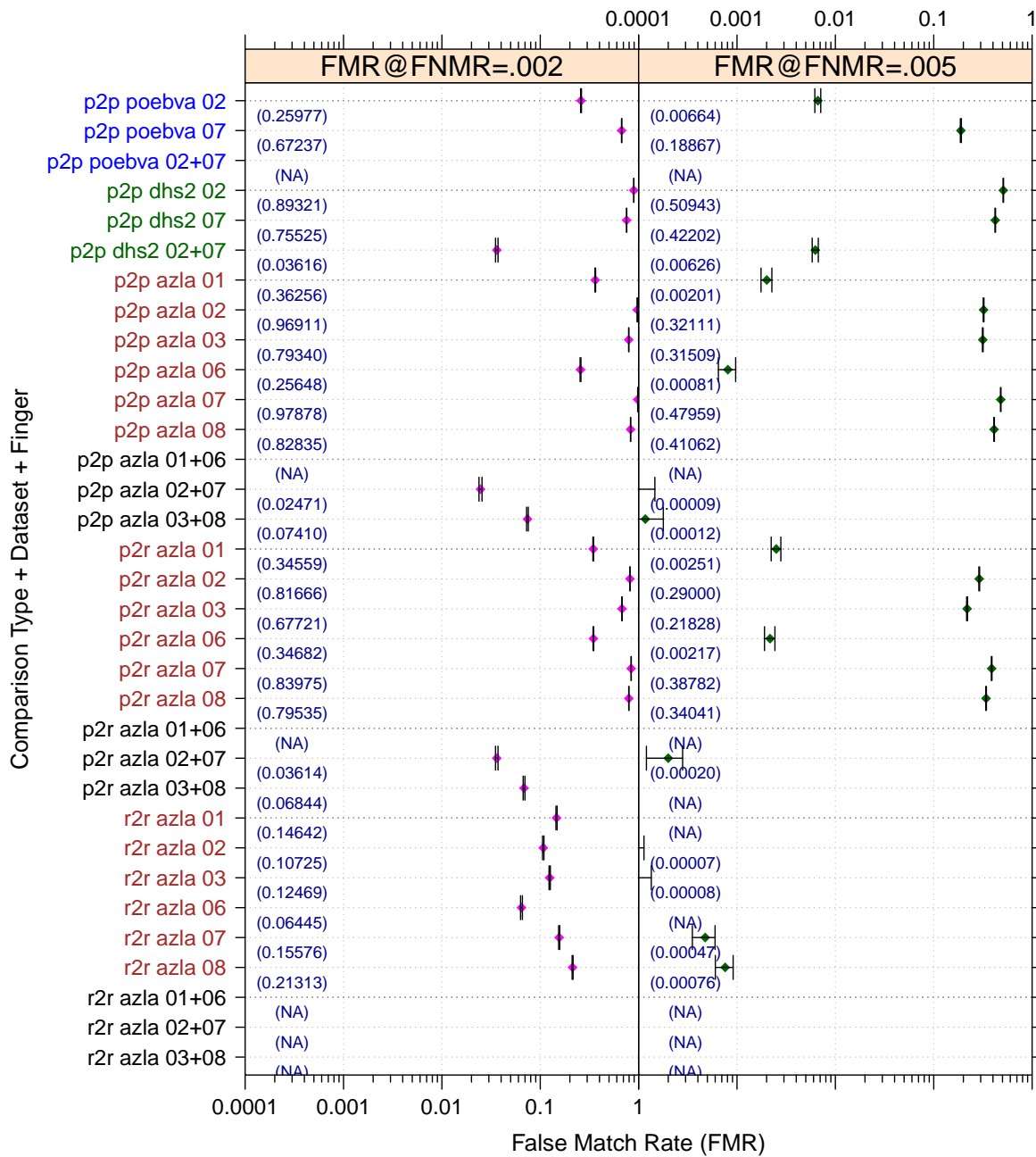


Figure 6: Full Evaluation – FMR@FNMR = (0.002, 0.005) and 95% Confidence Intervals

Note: “n/a” indicates that the value could not be reliably measured with the available sample size.

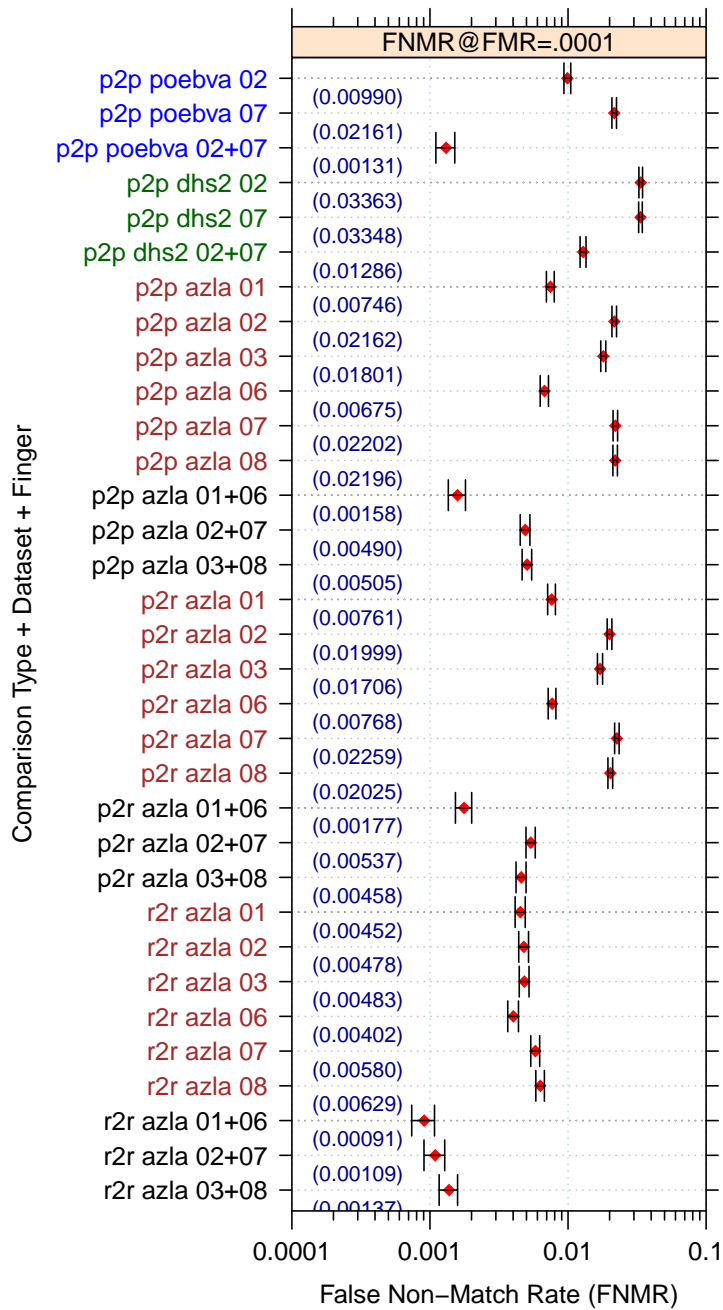


Figure 7: Full Evaluation – FNMR@FMR = 0.0001 and 95% Confidence Intervals

Note: “n/a” indicates that the value could not be reliably measured with the available sample size.

		EER	FTE Rate
Plain to Plain	<i>R Thumb</i>	0.0045	0.0003
	<i>R Index</i>	0.0114	0.0010
	<i>R Middle</i>	0.0107	0.0005
	<i>L Thumb</i>	0.0041	0.0001
	<i>L Index</i>	0.0131	0.0008
	<i>L Middle</i>	0.0123	0.0004
	<i>R/L Thumb</i>	0.0013	0.0002
	<i>R/L Index</i>	0.0031	0.0009
	<i>R/L Middle</i>	0.0033	0.0004
Plain to Rolled	<i>R Thumb</i>	0.0046	0.0001
	<i>R Index</i>	0.0111	0.0003
	<i>R Middle</i>	0.0100	0.0001
	<i>L Thumb</i>	0.0046	0.0001
	<i>L Index</i>	0.0127	0.0003
	<i>L Middle</i>	0.0116	0.0002
	<i>R/L Thumb</i>	0.0014	0.0001
	<i>R/L Index</i>	0.0032	0.0003
	<i>R/L Middle</i>	0.0032	0.0002
Rolled to Rolled	<i>R Thumb</i>	0.0032	0.0001
	<i>R Index</i>	0.0034	0.0000
	<i>R Middle</i>	0.0035	0.0000
	<i>L Thumb</i>	0.0028	0.0001
	<i>L Index</i>	0.0039	0.0000
	<i>L Middle</i>	0.0042	0.0001
	<i>R/L Thumb</i>	0.0008	0.0001
	<i>R/L Index</i>	0.0008	0.0000
	<i>R/L Middle</i>	0.0012	0.0001

Table 4: EER and FTE — Dataset AZLA

		EER	FTE Rate
<i>R Index</i>	0.0174	0.0005	
<i>L Index</i>	0.0160	0.0003	
<i>R/L Index</i>	0.0054	0.0004	

Table 5: EER and FTE — Dataset DHS2

		EER	FTE Rate
<i>R Index</i>	0.0052	0.0005	
<i>L Index</i>	0.0104	0.0005	
<i>R/L Index</i>	0.0008	0.0005	

Table 6: EER and FTE — Dataset POEBVA

		FNMR@FMR = 0.0001	FMR@FNMR = 0.002	FMR@FNMR = 0.005
Plain to Plain	<i>R Thumb</i>	0.0075 ±0.00049	0.3626 ±0.00272	0.0020 ±0.00025
	<i>R Index</i>	0.0216 ±0.00082	0.9691 ±0.00098	0.3211 ±0.00264
	<i>R Middle</i>	0.0180 ±0.00075	0.7934 ±0.00229	0.3151 ±0.00263
	<i>L Thumb</i>	0.0067 ±0.00046	0.2565 ±0.00247	0.0008 ±0.00016
	<i>L Index</i>	0.0220 ±0.00083	0.9788 ±0.00081	0.4796 ±0.00283
	<i>L Middle</i>	0.0220 ±0.00083	0.8284 ±0.00213	0.4106 ±0.00278
	<i>R/L Thumb</i>	0.0016 ±0.00022	n/a	n/a
	<i>R/L Index</i>	0.0049 ±0.00040	0.0247 ±0.00088	0.0001 ±0.00005
	<i>R/L Middle</i>	0.0050 ±0.00040	0.0741 ±0.00148	0.0001 ±0.00006
Plain to Rolled	<i>R Thumb</i>	0.0076 ±0.00049	0.3456 ±0.00269	0.0025 ±0.00028
	<i>R Index</i>	0.0200 ±0.00079	0.8167 ±0.00219	0.2900 ±0.00257
	<i>R Middle</i>	0.0171 ±0.00073	0.6772 ±0.00265	0.2183 ±0.00234
	<i>L Thumb</i>	0.0077 ±0.00049	0.3468 ±0.00269	0.0022 ±0.00026
	<i>L Index</i>	0.0226 ±0.00084	0.8397 ±0.00208	0.3878 ±0.00276
	<i>L Middle</i>	0.0203 ±0.00080	0.7954 ±0.00228	0.3404 ±0.00268
	<i>R/L Thumb</i>	0.0018 ±0.00024	0.0000 ±0.00003	n/a
	<i>R/L Index</i>	0.0054 ±0.00041	0.0361 ±0.00106	0.0002 ±0.00008
	<i>R/L Middle</i>	0.0046 ±0.00038	0.0684 ±0.00143	0.0001 ±0.00004
Rolled to Rolled	<i>R Thumb</i>	0.0045 ±0.00038	0.1464 ±0.00200	0.0001 ±0.00004
	<i>R Index</i>	0.0048 ±0.00039	0.1072 ±0.00175	0.0001 ±0.00005
	<i>R Middle</i>	0.0048 ±0.00039	0.1247 ±0.00187	0.0001 ±0.00005
	<i>L Thumb</i>	0.0040 ±0.00036	0.0644 ±0.00139	0.0000 ±0.00003
	<i>L Index</i>	0.0058 ±0.00043	0.1558 ±0.00205	0.0005 ±0.00012
	<i>L Middle</i>	0.0063 ±0.00045	0.2131 ±0.00232	0.0008 ±0.00016
	<i>R/L Thumb</i>	0.0009 ±0.00017	n/a	n/a
	<i>R/L Index</i>	0.0011 ±0.00019	n/a	n/a
	<i>R/L Middle</i>	0.0014 ±0.00021	n/a	n/a

Table 7: Details for FNMR@FMR = 0.0001 and FMR@FNMR = (0.002, 0.005) — Dataset AZLA

Note: “n/a” indicates that the value could not be reliably measured with the available sample size.

	FNMR@FMR = 0.0001	FMR@FNMR = 0.002	FMR@FNMR = 0.005
<i>R Index</i>	0.0336 ±0.00102	0.8932 ±0.00175	0.5094 ±0.00283
<i>L Index</i>	0.0335 ±0.00102	0.7552 ±0.00243	0.4220 ±0.00279
<i>R/L Index</i>	0.0129 ±0.00064	0.0362 ±0.00106	0.0063 ±0.00045

Table 8: Details for FNMR@FMR = 0.0001 and FMR@FNMR = (0.002, 0.005) — Dataset DHS2

	FNMR@FMR = 0.0001	FMR@FNMR = 0.002	FMR@FNMR = 0.005
<i>R Index</i>	0.0099 ±0.00056	0.2598 ±0.00248	0.0066 ±0.00046
<i>L Index</i>	0.0216 ±0.00082	0.6724 ±0.00266	0.1887 ±0.00221
<i>R/L Index</i>	0.0013 ±0.00020	n/a	n/a

Table 9: Details for FNMR@FMR = 0.0001 and FMR@FNMR = (0.002, 0.005) — Dataset POEBVA

Note: “n/a” indicates that the value could not be reliably measured with the available sample size.

3 Original PFT Dataset

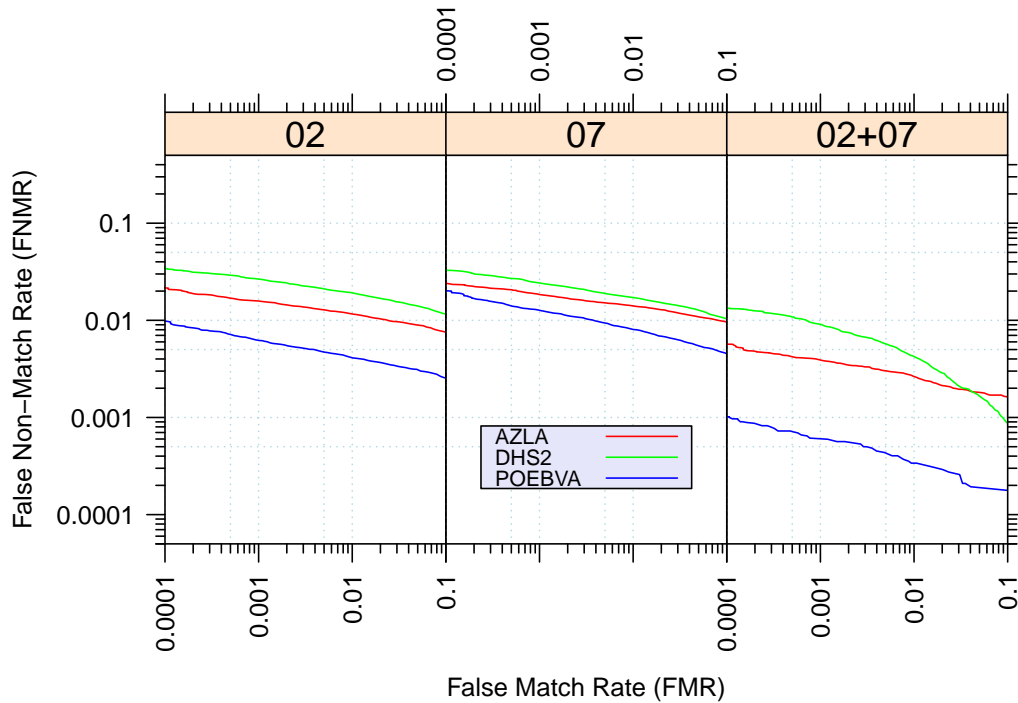


Figure 8: Original PFT Dataset – DET

		EER	FNMR@FMR = 0.0001	FMR@FNMR = 0.005
AZLA	<i>R Index</i>	0.0113	0.0215	0.2913
	<i>L Index</i>	0.0134	0.0238	0.5136
	<i>R/L Index</i>	0.0033	0.0057	0.0001
DHS2	<i>R Index</i>	0.0171	0.0340	0.5201
	<i>L Index</i>	0.0157	0.0327	0.4290
	<i>R/L Index</i>	0.0055	0.0133	0.0069
POEBVA	<i>R Index</i>	0.0047	0.0098	0.0039
	<i>L Index</i>	0.0082	0.0202	0.0763
	<i>R/L Index</i>	0.0006	0.0010	n/a

Table 10: Details for EER, FNMR@FMR = 0.0001, and FMR@FNMR = 0.005 — Original PFT Dataset

Note: “n/a” indicates that the value could not be reliably measured with the available sample size.