Latent Print Quality Measures

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Elements of Latent "Difficulty"

- Quantity - % of full print present, square area, etc.

- Clarity – Quality, Focus, Resolution, etc.

- Contrast – % of Grayscale range utilized, Average (shift), etc.

- Pressure – Vertical pressure, ridge to furrow thickness, etc.

- Slippage – Lateral pressure, ridge flow distortion, smearing, etc.

- Background – Substrate distortion, texture interference, etc.

- Focal Points – Core, Delta, Occasional features, Major flow convergence/divergence, etc.

Verification Packet Worksheet

ANSWER SHEET

LAT. # (in order)	Quant 1-5	Clarity 1-5	Contrast 1-5 (L-D)	Pressure 1-5	Lateral 1-5	Bckgrnd 1-5	Focals 1-5	TIME (min) per latent	LAST NAME of Identified (please print)	FINGER NUMBER	Confidence 1-3
F2-01	5	5	5	5	5	5	5	2	Locard	4	3
F2-02	4	4	3	4	3	4	3	30	Thompson	1	3
F2-03	4	4	4	4	4	4	3	4	Cummins	2	3
F2-04	4	4	4	4	4	4	4	5	Chatterjee	LP	3
F2-05	5	4	4	4	4	4	4	2	Hale	2	3
F2-06	5	5	5	4	4	4	5	2	Bidloo	7	3
F2-07	5	5	5	4	4	4	5	2	Locard	5	3
F2-08	4	5	4	3	4	4	4	10	Thompson	2	3
F2-09	5	5	5	5	5	5	5	8	Chatterjee	RP	3
F2-10	5	4	3	3	3	3	4	10	Cummins	8	3

Examples

- ## Quantity - % of full print present, square area, etc.
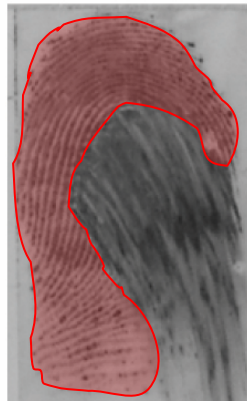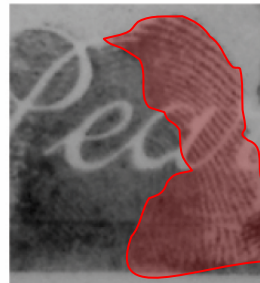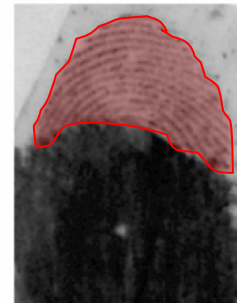
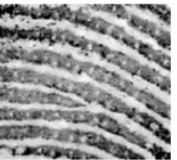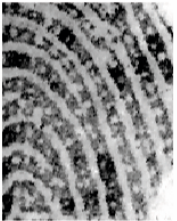| Very easy (5)	Easy (4)	Average (3)	Hard (2)	Very hard (1)
>50%	30-50%	15-30%	5-15%	<5%

Examples

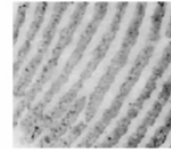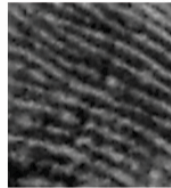- ## Clarity – Quality, Focus, "Crispness", Resolution, etc.
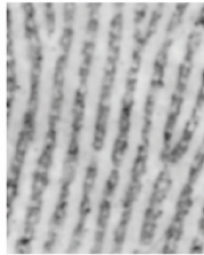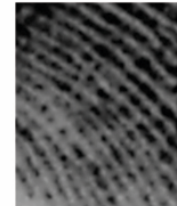
Very easy (5)	Easy (4)	Average (3)	Hard (2)	Very hard (1)
Very high	High	Average	Low	Very low
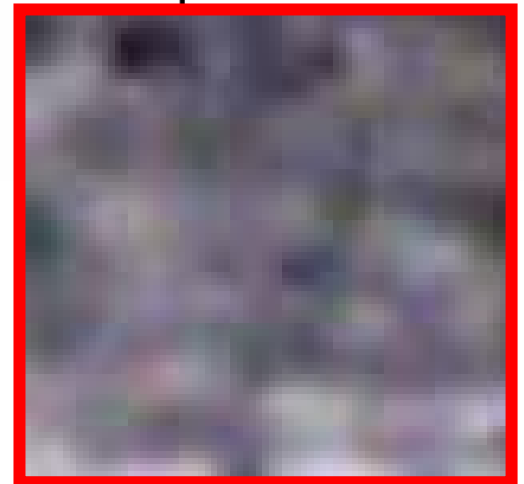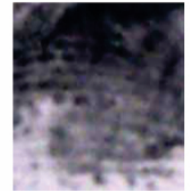
Examples

- ## Contrast – % of Grayscale range utilized, Average (shift), etc.
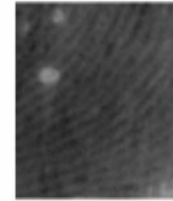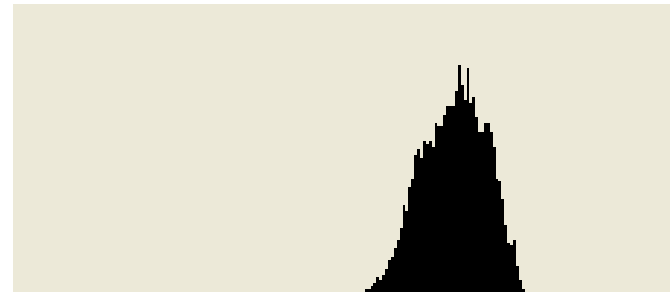
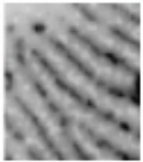| Very easy (5)	Easy (4)	Average (3)	Hard (2)	Very hard (1)
Very high	High	Average	Low	Very low

"L"

"D"

Examples

- ## Pressure – Vertical pressure, ridge to furrow thickness, etc.
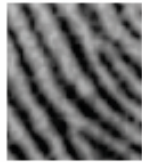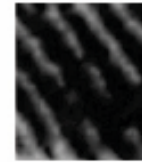
Very easy (5)	Easy (4)	Average (3)	Hard (2)	Very hard (1)
Very low	Low	Average	High	Very high
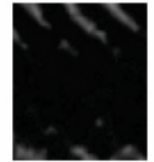
Examples

- Slippage – <u>Lateral pressure</u>, ridge flow distortion, smearing, etc.

| Very easy (5) | Easy (4) | Average (3) | Hard (2) | Very hard (1) |
| Very low | Low | Average | High | Very high |

Examples

- Background – Substrate distortion, texture interference, etc.
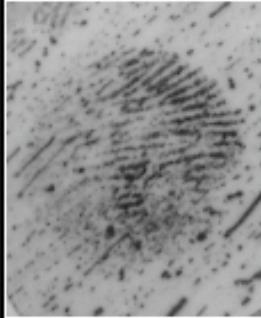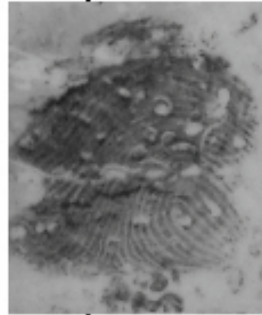
Examples

- ## Focal Points – Core, Delta, Occasional features, Major flow convergence/divergence, etc.
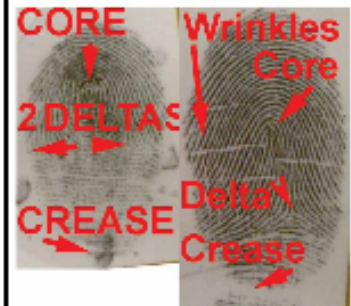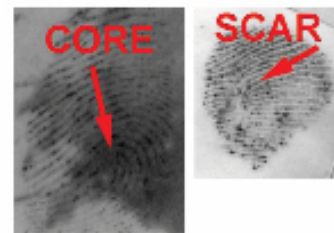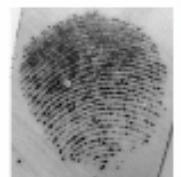
Discussion

- Are there other elements?

- Do current automated quality algorithms capture these elements?

- Can they be refined to do so?

- What role should human examiner perspectives/experience play in shaping how automated quality measures are defined?

Contact Information

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