

**Contribution From Transaction Security, Inc.**

**Consolidation of Unposted Comments On  
Signature/Sign Biometric Data Interchange Format  
Version E and before**

This document contains a consolidation of comments, previously unposted to M1, from various sources, which Transaction Security, Inc believes to be appropriate to the further development of the Signature/Sign Biometric Data Interchange Format standard.

**Source: Transaction Security, Inc**

**Date: October 17, 2003**

**COMMENT A:  
Ref Version E**

- 1) The title of the document should be changed to: **Signature/Sign Biometric Data Interchange Format**
- 2) Annex A should be clarified
- 3) Reference to Conformance should be removed from the scope

**COMMENT B:  
Ref. Document: Signature / Sign Image Based Interchange Format Version C**

1. General

Terms and descriptions in the document confuse in the data acquisition process. After defining appropriate terms and descriptions, the format should be standardized.

The proposed format is focused only on X, Y, T, and P. However, pen azimuth and pen altitude shown in Fig.1 are also useful, and some research reports using azimuth and altitude are appeared in transactions and proceedings of international conferences. In consideration of future research expansion in this area, the standard should have two optional data A1 for azimuth and A2 for altitude.

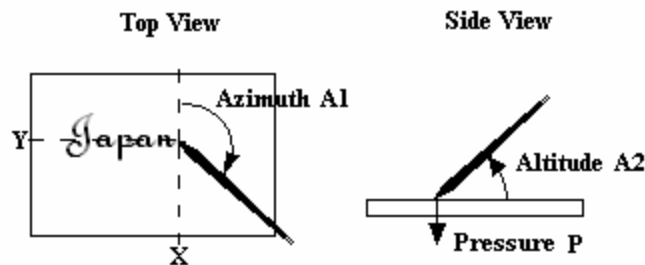


Fig.1 Pen azimuth and Pen altitude

2. Terms and Descriptions for consideration

- |        |  |
|--------|--|
| Page 3 | Patent Issues: There is no description.                                |
| Page 3 | Conformance and Compliance: Further description is required.           |
| Page 4 | 4.1 optionally: to be removed, because pressure is invaluable feature. |
| Page 4 | 4.7 T resolution is the sampling frequency in samples per second:      |
| Page 5 | 4.11 Biometric data: to be changed to Biometric feature data.          |
| Page 7 | 5.3.2 "20": to be changed to "10"                                      |

3. Proposal on Addition of Pen Azimuth and Pen Altitude data

We propose a new flag and raw signature data format, in order to add two optional data A1 and A2, where A1 is pen azimuth and A2 is pen altitude. The proposed raw data format is as follows.

3.2 Signature/Sign Feature Data for each Signature/Sign or Template:

Alternative to 5.3 2) in  
Page 7

Signature/Sign Feature Data Type	1 Byte	Sample Data or Template Data
Digitizer ID	2 Bytes	Zero if template data.
X Resolution	2 Bytes	Zero if template data.
Y Resolution	2 Bytes	Zero if template data.
T Resolution	2 Bytes	Zero if template data.
P Resolution	1 Bytes	Zero if template data.
A1 Resolution	2 Bytes	Not present if no azimuth data.
A2 Resolution	2 Bytes	Not present if no altitude data.
Common Feature Sample Data Area	N Bytes	Definition and Format TBD. Zero if no sample data.
Common Feature Template Area	M Bytes	Definition and Format TBD. Zero if no Template data.
Type Code for Private Area	2 Bytes	if zero, no private area
Length of Private Data Area	2 Bytes	Not present if no private Area.
Private Data Area		As above Not present if no private area

3.3 Raw data format: Alternative to 5.3 3) in Page 7

Number of bytes in image	2 Bytes, if zero, no raw data
X1,Y1,T1,P1,(A1-1, A2-2)	2 + 2 + 2 + 1 ( + 2 + 2)
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.	
.	
Xn,Yn,Tn,Pn,(A1-n, A2-n)	2 + 2 + 2 + 1 ( + 2 + 2)

**COMMENT C "Signature/Sign Based Biometric Data Interchange Format"  
(Ref. Document: Signature / Sign Image Based Interchange Format Version C)**

Comments:

*General*

The term signature/sign image leads to confusion with the aim of the proposed Standard. The proposed standard mixes raw data, feature data and template data as well as transformation. The suggested terms should be homogeneously used within biometrics landscape. We suggest distinguish between signature capture data level and signature feature level. Both levels are worth standardizing

The proposed standard is limited to digitizer. Besides digitizer special pens are also usable. The standard should be open for every capture device which produces X,Y data

All common biometric definitions like biometric data, identification or template update should be checked against existent standards of biometric capture or feature data. All standards and proposals should be harmonized by using such terms.

*Specific*

4 Definitions

4.1 The chosen definition limits the standard to digitizer that are well known today. The term "optionally". to use pressure values should be deleted.

Pressure is an important feature of writing movement.

4.7 The term .T. leads to confusion with units of time. As described .T-resolution is a frequency. A frequency is shortened in scientific publication as .f.

4.13 We are not sure if a system could be defined in this manner.

4.16 The term .claimant. is not in common use. The usability should be checked.

4.17 The terms .biometric feature data. and .biometric reference template. are not defined.

5 Sign Image Format

5.3 Signature / Sign Data Record Format

5.3.2 The version number shall be "10" instead of .20..

5.4 Signature / Sign Feature Data

The term "feature data" leads to confusion. It is not clear if preprocessing was carried out or not.

Add Tilt / rotation resolution, or 0

5.4.2 The description differs from list 5.3. 2).

5.4.3 The description differs from list 5.3. 2).

5.5 Raw Signature / Sign Data

The proposed structure is limited to digitizers. Alternative captures devices like capture pens are not usable.

Recommendations / Open items:

Harmonize common biometric definitions

If the proposed standard will use for templates

- o Security aspects should be described.
- o Access of verification / identification engines to the same template should clarified.