Proposed Modifications For EDIINT AS2 convergence

Revision 2.1

February 14, 2000

Introduction

This document describes the set of changes needed to GISB's EDM technical implementation, as determined by a sub-committee of the GISB FTTF, to align with the IETF EDIINT AS2 specification. All of the changes proposed in this document affect the section titled **Technical Implementation – Internet EDI/EDM & Batch FF/EDM.** This document is NOT intended to provide a comprehensive set of all changes needed to the GISB EDM standards manual. Additional enhancements, germane to other sections of the EDM manual (e.g. Introduction, Executive Summary, Business Process and Practices, Related Standards), will be presented in a later document.

This document is intended for GISB EDM programmers.

Executive Summary

The purpose of this document is to define the set of changes to the Internet EDM portion of GISB EDM V1.4, in order to address the business needs for privacy, authentication, integrity and non-repudiation of Origin and Receipt as specified in "HTTP Transport for Secure EDI" (a.k.a. EDIINT AS2). These proposed changes eliminate a possible legal loophole in the current GISB EDM specification, the ability for a party issuing a receipt to deny having done so. Without a "signed receipt" it's possible for a party to repudiate a receipt (a.k.a. timestamp) in a court of law. The proposed changes address non-repudiation concerns for both error notifications and receipts.

It's important to note that these proposed changes do NOT mandate the use of signed error notifications or receipts, but rather makes the signing of these documents available on a mutually agreed basis.

In addition, there are other business benefits gained from adherence to EDIINT AS2:

- broader standard allows potential to more readily, electronically trade with others (e.g., electric utilities, banks, suppliers, retail customers)
- broader standard makes it more likely that packages can be purchased to replace custom written apps currently in place to support GISB EDM

EDIINT AS2 is an international standard that is being developed by the Internet's Engineering Task Force, the Internet standards body. Adherence with a formal, international Internet standard, such as AS2 ensures that the specification will not change without due process and any changes that do occur will be the result of a broad consensus. Individual companies and entire industries are free to use as much or as little of AS2 as they see fit, providing the maximum flexibility to meet business needs.

Proposed Enhancements

Proposed Changes to Data Dictionary

Page 2, Data Dictionary for Internet EDM – include the following:

Business Name	Definition	Format	Usage	Condition
gisb-version	The GISB EDM version being used	numeric, decimal notation (e.g. 1.4)	in Request; M	used in file transmittal and in posting error notifications
`receipt-disposition-to`	the party to receive receipts, typically the same value as "from".	Common Code Identifier format	in Request; M	used in file transmittal and in posting error notifications
`receipt-report-type`	type of receipt type being requested by sender	`GISB-Acknowledgement-Receipt`	in Request; M	used in file transmittal and in posting error notifications
`receipt-security-selection`	Used to request signed receipts	`signed-receipt-protocol=required, pgp-signature; signed-receipt-micalg=required, md5`	In Request, MA	Used in file transmittal and in posting error notifications

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Proposed changes to section **SENDING TRANSACTIONS**, subsection **GENERAL FLOW, Page 2,** imme following item 11:

If trading partners agree to implement signed receipts then the sending party must include the "`receipt-security-selection`" data element in the posted data. The receiving party must digitally sign the GISB-Acknowledgement-Receipt and encapsulate the GISB-acknowledgement-receipt and digital signature bo parts within a MIME envelope with a Content-type of application/pgp-signature.

Proposed changes to section **SENDING TRANSACTIONS**, subsection **Sample of HTML document with a form to perform a multipart post using an interactive browser:**

Page 4, within the text of the example, following the To: <input …> line insert the following:

GISB Version: <input TYPE="text" NAME="gisb-version" SIZE=5 VALUE="1.4">

Deliver Receipt To: <input TYPE="text" NAME="report-disposition-to" SIZE=20 VALUE="">

Receipt Type: <input TYPE="text" NAME="receipt-report-type" SIZE=30
VALUE="`GISB-Acknowledgement-Receipt`">

IF requesting signed receipts also include:

```
Receipt Type: <input TYPE="text" NAME="receipt-security-selection" SIZE=30   VALUE=" signed-receipt-protocol=required, pgp-signature; signed-receipt-micalg=required, md5"><br>
```

Proposed changes to section **SENDING TRANSACTIONS**, subsection **Server Response**

Page 5, replace the first sentence with the following:

"The receiving server will send a GISB-Acknowledgement-Receipt as an HTTP response to the client before dropping the client's connection. If the transacting parties agree to use signed receipts, then the receiving server applies a digital signature to the GISB-Acknowledgement-Receipt and encapsulates the entire package in a MIME envelope of Content-type: application/pgp-signature."

Proposed changes to section **SENDING TRANSACTIONS**, subsection **HTTP Request Data Elements**

Page 6, insert the following rows into the Required Data Elements table, between the to and input-format rows:

gisb-version	The GISB EDM version being used by the sender, in decimal notation (e.g. 1.4)
`receipt-disposition-to`	Common Code Identifier of the party to receive the acknowledgement receipt
`receipt-report-type`	Type of receipt requested "`GISB-Acknowledgement-Receipt`"

Page 6, insert into the last row of the Mutually Agreed to Data Elements table, the following:

`receipt-security-selection`	Used to request signed receipts from the party receiving a file upload.

Proposed changes to section **SENDING TRANSACTIONS**, subsection **Writing a Batch Browser**

Page 8, replace the example with the following:

----------87453838942833
Content-Disposition: form-data; name="from"

123456789
----------87453838942833
Content-Disposition: form-data; name="to"

234567890
----------87453838942833
Content-Disposition: form-data; name="gisb-version"

1.4
----------87453838942833
Content-Disposition: form-data; name="receipt-disposition-to"

123456789
----------87453838942833
Content-Disposition: form-data; name="receipt-report-type"

`GISB-Acknowledgement-Receipt`
----------87453838942833
Content-Disposition: form-data; name="input-format"

X12
----------87453838942833
Content-Disposition: form-data; name="input-data"; filename="c:\temp\smallnom.bin"
Content-Type: application/EDI-X12

ISA~00~ ~01~AAA6300300~14~1234567890000 ~14~2345678900000
... more data from the X12 file…
IEA~1~000003616
----------87453838942833—

If requesting a signed receipt also include:

Content-Disposition: form-data; name="receipt-security-selection"

signed-receipt-protocol=required, pgp-signature; signed-receipt-micalg=required, md5

Proposed changes to section **SENDING TRANSACTIONS**, subsection **Writing a Batch Browser**

Page 8, replace the last bulleted paragraph on the page with the following:

The data field containing the GISB standard file has two extra identifiers: first the name of the file sent

from the source computer, filename="c:\temp\smallnom.bin", and second a content type identifier on a separate line. This line should always be constructed to reflect the content-type of the data being transmitted, in accordance with accepted Internet standards. If the data file contains clear text, X12 data, as shown in the above example, the content-type identifier follows the recommendations of RFC 1767, "MIME Encapsulation of EDI Data", and the "Content-Type:application/EDI-X12" is used. However, for security purposes it is recommended that all data be encrypted and digitally signed prior to transmission over the Internet. There are IETF standards for describing and packaging encrypted data files, most notably, "MIME Security with Pretty Good Privacy (PGP)", RFC 2015 and "MIME-based Secure EDI", RFC TBD.

When the sender of a file intends to use encryption and digital signature functions to secure the contents of a data file the file must be prepared in accordance with the above mentioned IETF standards. ASC X12 data must first be *prepared* in canonical form as specified in RFC 1767. The ASC X12 data file would be concatenated with the MIME Content-type of application/EDI-X12 as the first line of the file, for example:

Content-type: application/EDI-X12

ISA~00~ ~01~AAA6300300~14~1234567890000 ~14~2345678900000
... more data from the X12 file…
IEA~1~000003616

This file, complete with EDI data and MIME header is encrypted, signed and packaged according to EDIINT AS1 and RFC 2015, which produces a file containing MIME headers and encrypted content as follows:

Content-Type: multipart/encrypted; boundary=8760; protocol="application/pgp-encrypted"

--8760
Content-Type: application/pgp-encrypted

Version: 1

--8760
Content-Type: application/octet-stream

-----BEGIN PGP MESSAGE-----
Version: PGP 6.5

hQCMAzRG1pEOIOvdAQP+JMr0m/9+8yOL60Z9Vr6fFV81FCExB/o0xmwiMkiwYsHs
z0e8sb7ErC340MrNA/dw3taGMjmI+CXYRF/PLEdg1NZE1ZCtNeL4YdIHAMLWwODG
lQxhSucz8rMSgQ5mZzcOJwBdWLW70efgsu/9UljuJjYc1uZ6C03eFQv/43fkB+al
ATtgydxX4g8QK664ad+Jo/XUICSmWBL66fqJR1KLeLf4wTaqGy174Aq48Wpwvg1E
h785zC03UAw0qg0ugMt86dPeyd91e2JigqwDYEf/DYEKD0J9BGiGpS/uAupNKj8O
cp2IWClxKOGUbxpVNOnNTqWHS/GntegvDE/7/ewCxDxsnmQS95pOl141QZ1RQbeN
aqx2Dq/ra9g65HNchOCzjul5Vi8HHf6Yhg2WnROe+npByyCue6rihqgNVOJwj0cV
zpb4JE+gMDf3q4ISUb1Fv7/+SSFHDdnhdC5YTpqf1Bc3B07hiLmtTXqNit31EbX9
UVElObzSa9ZhxbC6/eSl7Nuf5ZTDsh9nrk+QQJ6FeC9W4cqXLj7IZySaRO8Vtff+
4ktqeuhYusT4kSpnk027aw4O/5jomUkfb22CAe4=
=Oiuo
-----END PGP MESSAGE-----
--8760--

This file is associated with the "input-data" data element of the multipart-form-data and is sent to the recipient using the HTTP POST method.

Proposed changes to section **SENDING TRANSACTIONS**, subsection **Writing a Batch Browser**

Page 9, replace the example with the following:

```
POST c:\execute HTTP/1.0
Referer: http://www.get.a.life/upl.htm
Connection: Keep-Alive
User-Agent: brow v0.1 XYZ Corp.
Host: localhost
Accept: image/gif, image/x-xbitmap, image/jpeg, image/pjpeg, */*
Content-type: multipart/form-data; boundary=----------------------------87453838942833
Content-Length: 5379

------------------------------87453838942833
Content-Disposition: form-data; name="from"

123456789
------------------------------87453838942833
Content-Disposition: form-data; name="to"

234567890
------------------------------87453838942833
Content-Disposition: form-data; name="gisb-version"

1.4
------------------------------87453838942833
Content-Disposition: form-data; name="receipt-disposition-to"

123456789
------------------------------87453838942833
Content-Disposition: form-data; name="receipt-report-type"

GISB-Acknowledgement-Receipt
------------------------------87453838942833
Content-Disposition: form-data; name="input-format"

X12
------------------------------87453838942833
Content-Disposition: form-data; name="input-data"; filename="c:\temp\smallnom.bin"
Content-Type: multipart/encrypted; boundary=8760; protocol="application/pgp-encrypted"

--8760
Content-Type: application/pgp-encrypted

Version: 1

--8760
Content-Type: application/octet-stream

-----BEGIN PGP MESSAGE-----
Version: PGP 6.5

hQCMAzRG1pEOIOvdAQP+JMr0m/9+8yOL60Z9Vr6fFV81FCExB/o0xmwiMkiwYsHs
z0e8sb7ErC340MrNA/dw3taGMjmI+CXYRF/PLEdg1NZE1ZCtNeL4YdIHAMLWwODG
lQxhSucz8rMSgQ5mZzcOJwBdWLW70efgsu/9UljuJjYc1uZ6C03eFQv/43fkB+al
ATtgydxX4g8QK664ad+Jo/XUICSmWBL66fqJR1KLeLf4wTaqGy174Aq48Wpwvg1E
h785zC03UAw0qg0ugMt86dPeyd91e2JigqwDYEf/DYEKD0J9BGiGpS/uAupNKj8O
cp2IWClxKOGUbxpVNOnNTqWHS/GntegvDE/7/ewCxDxsnmQS95pOl141QZ1RQbeN
aqx2Dq/ra9g65HNchOCzjul5Vi8HHf6Yhg2WnROe+npByyCue6rihqgNVOJwj0cV
zpb4JE+gMDf3q4ISUb1Fv7/+SSFHDdnhdC5YTpqf1Bc3B07hiLmtTXqNit31EbX9
UVElObzSa9ZhxbC6/eSl7Nuf5ZTDsh9nrk+QQJ6FeC9W4cqXLj7IZySaRO8Vtff+
4ktqeuhYusT4kSpnk027aw4O/5jomUkfb22CAe4=
=Oiuo
-----END PGP MESSAGE-----
```

--8760--
----------87453838942833—

Proposed changes to section **RECEIVING TRANSACTIONS**, subsection **General Flow**

Page 10, replace list items 5 and 6 with the following:

5. Create GISB Acknowledgement Receipt
5.1 If using signed receipts:
  5.1.1 Produce a digital signature over the GISB Acknowledgement Receipt created in step 5
  5.1.2 Encapsulate the GISB Acknowledgement Receipt and Digital Signature body parts in a content-type of application/multipart/signed envelope
6. Return HTTP response, the GISB Acknowledgement Receipt object, back to server

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Proposed changes to section **RECEIVING TRANSACTIONS**, subsection **Writing the CGI Process**

Page 12, replace the example with the following:

----------87453838942833
Content-Disposition: form-data; name="from"

123456789
----------87453838942833
Content-Disposition: form-data; name="to"

234567890
----------87453838942833
Content-Disposition: form-data; name="gisb-version"

1.4
----------87453838942833
Content-Disposition: form-data; name="receipt-disposition-to"

123456789
----------87453838942833
Content-Disposition: form-data; name="receipt-report-type"

GISB-Acknowledgement-Receipt
----------87453838942833
Content-Disposition: form-data; name="input-format"

X12
----------87453838942833
Content-Disposition: form-data; name="input-data"; filename="c:\temp\smallnom.bin"
Content-Type: multipart/encrypted; boundary=8760; protocol="application/pgp-encrypted"

--8760
Content-Type: application/pgp-encrypted

Version: 1

--8760
Content-Type: application/octet-stream

-----BEGIN PGP MESSAGE-----
Version: PGP 6.5

hQCMAzRG1pEOIOvdAQP+JMr0m/9+8yOL60Z9Vr6fFV81FCExB/o0xmwiMkiwYsHs
z0e8sb7ErC340MrNA/dw3taGMjmI+CXYRF/PLEdg1NZE1ZCtNeL4YdIHAMLWwODG
lQxhSucz8rMSgQ5mZzcOJwBdWLW70efgsu/9UljuJjYc1uZ6C03eFQv/43fkB+al
ATtgydxX4g8QK664ad+Jo/XUICSmWBL66fqJR1KLeLf4wTaqGy174Aq48Wpwvg1E
h785zC03UAw0qg0ugMt86dPeyd91e2JigqwDYEf/DYEKD0J9BGiGpS/uAupNKj8O

cp2IWClxKOGUbxpVNOnNTqWHS/GntegvDE/7/ewCxDxsnmQS95pOl141QZ1RQbeN
aqx2Dq/ra9g65HNchOCzjul5Vi8HHf6Yhg2WnROe+npByyCue6rihqgNVOJwj0cV
zpb4JE+gMDf3q4ISUb1Fv7/+SSFHDdnhdC5YTpqf1Bc3B07hiLmtTXqNit31EbX9
UVElObzSa9ZhxbC6/eSl7Nuf5ZTDsh9nrk+QQJ6FeC9W4cqXLj7IZySaRO8Vtff+
4ktqeuhYusT4kSpnk027aw4O/5jomUkfb22CAe4=
=Oiuo
-----END PGP MESSAGE-----
--8760--
----------87453838942833—

Proposed changes to section **RECEIVING TRANSACTIONS**, subsection **Writing the CGI Process**

Page 13, replace the last paragraph on the page with the following:

Immediately after the CGI validates (as above), parses, and saves the data, the CGI should record the time and construct a GISB Acknowledgement Receipt described in the following section. This GISB Acknowledgement Receipt is usually sent from the CGI by writing to the standard output (stdout) of the CGI process. If using signed receipts, the receiving party must produce a digital signature of the GISB Acknowledgement Recipt and send both the GISB Acknowledgement Receipt and digital signature boday parts within a multipart/signed MIME envelope.

Proposed changes to section **URL/CGI Implementation Guidelines**

Page 14, replace the first sentence in the paragraph starting with “Error Notifications” with the following:

Error notifications include errors that occur some time after the GISB Acknowledgement Receipt is sent (such as a file decryption error) as well as errors on the transactions.

Proposed changes to section **URL/CGI Implementation Guidelines**, subsection **Server Specifications**

Page 15, replace the sentence starting with “The HTTP response must be enveloped” with the following:

The GISB Acknowledgement Receipt must be enveloped in a multipart/report, as specified in EDIINT AS2 following the rules for Generalized Receipts. If signed receipts are used, the GISB Acknowledgement Receipt (including the multipart/report envelope) is digitally signed, producing a application/pgp-encrypted body part. Both the multipart/report (GISB Acknowledgement Receipt) and the application/pgp-signature body parts are placed in a multipart/signed envelope and the entire package is returned to the sender.

Proposed changes to section **URL/CGI Implementation Guidelines**, subsection **Server Specifications**

Page 15, remove the sentence “The HTTP response must be no more than 2048 characters.”

Proposed changes to section **URL/CGI Implementation Guidelines**, subsection **Server Specifications**

Page 15, replace the paragraph starting with “If an HTML response is given” with the following:

If a response is given, a GISB Acknowledgement Receipt contains two body parts nested within a multipart/report outer envelope. The first body part contains human readable content in HTML. The second body part contains machine readable content in HTML. If signed receipts are used, the multipart/report is contained in a multipart/signed envelope, along with a corresponding digital signature.

Proposed changes to section **URL/CGI Implementation Guidelines**, subsection **HTTP Response Data Elements**

Page 16, replace the example given under “successful, plain text format:” with the following:

Content-Type: multipart/report; report-type="GISB-Acknowledgement-Receipt";
boundary="GISB7867"

--GISB7867
Content-type: text/html

<HTML><HEAD><TITLE>Acknowledgement Receipt Success</TITLE></HEAD> <BODY><P>
time-c=19960619082855*
request-status=ok*
server-id=coolhost*
trans-id=234423897*
</P> </BODY></HTML> --GISB7867
Content-type: text/plain

time-c=19960619082855*
request-status=ok*
server-id=coolhost*
trans-id=234423897*
--GISB7867--

Proposed changes to section **URL/CGI Implementation Guidelines**, subsection **HTTP Response Data Elements**

Page 16, replace the example given under “error, plain text format:” with the following:

Content-Type: multipart/report; report-type="GISB-Acknowledgement-Receipt";
boundary="GISB7866"

--GISB7866
Content-type: text/html

<HTML><HEAD><TITLE>Acknowledgement Receipt Error</TITLE></HEAD> <BODY><P>
time-c=19960619082855*
request-status=EEDM106: Invalid To Common Code Identifier*
server-id=coolhost*
trans-id=234423897*
</P> </BODY></HTML>
--GISB7866
Content-type: text/plain

time-c=19960619082855*
request-status=EEDM106: Invalid To Common Code Identifier*
server-id=coolhost*
trans-id=234423897*
--GISB7866--

Proposed changes to section **URL/CGI Implementation Guidelines**, subsection **HTTP Response Data Elements**

Page 16, replace the example given under “warning, plain text format:” with the following:

Content-Type: multipart/report; report-type="GISB-Acknowledgement-Receipt";
boundary="GISB7866"

--GISB7866
Content-type: text/html

<HTML><HEAD><TITLE>Acknowledgement Receipt Warning</TITLE></HEAD> <BODY><P>
time-c=19960619082855*
request-status=WEDM100: Transaction Set Sent, Not Mutually Agreed*
server-id=coolhost*
trans-id=234423897*
</P> </BODY></HTML>
--GISB7866
Content-type: text/plain

time-c=19960619082855*
request-status= WEDM100: Transaction Set Sent, Not Mutually Agreed *
server-id=coolhost*
trans-id=234423897*
--GISB7866--

Proposed changes to section **URL/CGI Implementation Guidelines**, subsection **HTTP Response Data Elements**

Page 17, remove the example given under “HTML format”.

Proposed changes to section **Sending Error Notification Transactions**, subsection **Error Notification**

Page 21, insert the following as the last paragraph of the subsection:

“Additionally, trading partners are permitted to utilize digitally signed error notifications, if both parties mutually agree to do so.”

Proposed changes to section **Sending Error Notification Transactions**, subsection **Error Notification Data Elements**

Page 22, remove the sentence containing “The entire error notification must be no more than 2048 characters.”

Proposed changes to section **Sending Error Notification Transactions**, subsection **Error Notification Data Elements**

Page 22, replace the paragraph starting with “If an HTML response is given” with the following:

If an error notification is given, a GISB Error Notification contains two body parts nested within a multipart/report outer envelope. The first body part contains human readable content in HTML. The second body part contains machine readable content in HTML. Additionally, consenting trading partners can mutually agree to digitally sign error notifications. If digital signatures are used, the multipart/report containing the GISB Error Notification is used to create a digital signature body part, identified by a content-type of application/pgp-signature. Both the multipart/report GISB Error Notification and application/pgp-encrypted digital signature body parts are combined in a multipart/signed envelope.

Proposed changes to section **Sending Error Notification Transactions**, subsection **Error Notification Data Elements**

Page 23, replace the example given under Error Notification Example with the following:

```
POST c:\execute HTTP/1.0
Referer: http://www.get.a.life/upl.htm
Connection: Keep-Alive
User-Agent: brow v0.1 XYZ Corp.
Host: localhost
Accept: image/gif, image/x-xbitmap, image/jpeg, image/pjpeg, */*
Content-type: multipart/form-data; boundary=----------------------------87453838942833
Content-Length: 1958
------------------------------87453838942833
Content-Disposition: form-data; name="from"

234567890
------------------------------87453838942833
Content-Disposition: form-data; name="to"

123456789
------------------------------87453838942833
Content-Disposition: form-data; name="gisb-version"

1.4
------------------------------87453838942833
Content-Disposition: form-data; name="receipt-disposition-to"

123456789
------------------------------87453838942833
Content-Disposition: form-data; name="receipt-report-type"

GISB-Acknowledgement-Receipt
------------------------------87453838942833
Content-Disposition: form-data; name="input-format"

error
------------------------------87453838942833
Content-Disposition: form-data; name="input-data"; filename="c:\temp\error.not"
Content-Type: multipart/report;  report-type="GISB-Error-Notification";
 boundary="GISB7868"

--GISB7868
Content-type: text/html

<HTML><HEAD><TITLE>Error Notification</TITLE></HEAD> <BODY><P>
orig-from=123456789*
orig-to=234567890*
orig-input-format=X12*
resp-time-c=19960619102855*
resp-server-id=coolhost*
resp-trans-id=234423897*
request-status=EEDM601: Public Key Invalid*
comments=Please contact 1-800-555-1212 for correct public key*
</P> </BODY></HTML>

--GISB7868
Content-Type: text/plain

orig-from=123456789*
orig-to=234567890*
orig-input-format=X12*
```

resp-time-c=19960619102855*
resp-server-id=coolhost*
resp-trans-id=234423897*
request-status=EEDM601: Public Key Invalid*
comments=Please contact 1-800-555-1212 for correct public key*
--GISB7868--
----------87453838942833--

EXAMPLES

Signed Receipt

Content-Type:multipart/signed; micalg=pgp-md5; protocol="application/pgp-signature"; boundary=8760

--8760

```
Content-Type: multipart/report;  report-type="GISB-Acknowledgement-Receipt";
 boundary="GISB7867"

--GISB7867
Content-type: text/html

<HTML><HEAD><TITLE>Acknowledgement Receipt Success</TITLE></HEAD> <BODY><P>
time-c=19960619082855*
request-status=ok*
server-id=coolhost*
trans-id=234423897*
</P> </BODY></HTML> --GISB7867
Content-type: text/plain

time-c=19960619082855*
request-status=ok*
server-id=coolhost*
trans-id=234423897*
--GISB7867--
```

--8760

Content-Type: application/pgp-signature

-----BEGIN PGP MESSAGE-----

Version: 2.6.2

iQCVAwUBMJrRF2N9oWBghPDJAQE9UQQAtl7LuRVndBjrk4EqYBIb3h5QXIX/LC//

JV5bNvkZIGPIcEmI5iFd9boEgvpirHtIREEqLQRkYNoBActFBZmh9GC3C041WGq

uMbrbxc+nIs1TIKlA08rVi9ig/2Yh7LFrK5Ein57U/W72vgSxLhe/zhdfolT9Brn

HOxEa44b+EI=

=ndaj

-----END PGP MESSAGE-----

--8760—

Signed Error Notification

Content-Type:multipart/signed; micalg=pgp-md5; protocol="application/pgp-signature"; boundary=8760

--8760

Content-Type: multipart/report; report-type="GISB-Error-Notification";
boundary="GISB7868"

--GISB7868
Content-type: text/html

<HTML><HEAD><TITLE>Error Notification</TITLE></HEAD> <BODY><P>
orig-from=123456789*
orig-to=234567890*
orig-input-format=X12*
resp-time-c=19960619102855*
resp-server-id=coolhost*
resp-trans-id=234423897*
request-status=EEDM601: Public Key Invalid*
comments=Please contact 1-800-555-1212 for correct public key*
</P> </BODY></HTML>

--GISB7868
Content-Type: text/plain

orig-from=123456789*
orig-to=234567890*
orig-input-format=X12*
resp-time-c=19960619102855*
resp-server-id=coolhost*
resp-trans-id=234423897*
request-status=EEDM601: Public Key Invalid*
comments=Please contact 1-800-555-1212 for correct public key*
--GISB7868--
--8760

Content-Type: application/pgp-signature

-----BEGIN PGP MESSAGE-----

Version: 2.6.2

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-----END PGP MESSAGE-----

--8760--