

# Towards Converged Message Abuse Reporting: IETF MARF and OMA SpamRep

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# Overview

- Goal: Convergence rather than competition
- Marf-base-06 & SpamRep V1 features and gaps
- Issues in convergence
- Appendix: Convergence roadmaps

# Abuse Reporting Goals

- Prevent competing standards for mobile and converged abuse reporting: prevent industry fragmentation
- IETF MARF and OMA SpamRep convergence on mobile reporting standards is ideal
- Compatible standards is a second choice
  - Permit automatic translation of MARF $\leftrightarrow$ SpamRep
  - Polymorphic report processing
  - Preserve Report ID (translation does not alter identity, permits association)

# MARF & SpamRep Features

Feature	marf-base-06	SpamRep20100708
Supported services	Email	Email, SMS, MMS, IM
Human readable part	Yes (multipart/report)	No
Transport Protocol	Compatible with SMTP	HTTP
Multiple abuse reports per message	Undefined, unspecified, may be inconsistent with RFC 3462 (multipart/report)	Yes (each is an element within a single XML document) [With optional reference to optional corpus MIME part]
Detection Information	No (or limited to auth, ...)	No (or limited to auth, ...)
MIME types	multipart/report (with mandatory MIME part for corpus or headers)	multipart/related, application/vnd.oma.spamrep+xml
Metadata scheme	Name/value pairs	XML
Transaction Protocol	Undefined, unspecified	Yes (request/response)
Extensible attributes	Yes	No
IDs	Optional 'Original-Envelope-Id'	ReporterID, ReportID, SpamMessageID where exists
Forwarding Permissions	No	Yes

# Key Convergence Issues

- Structure of MIME parts
- Metadata representation: XML vs Name/Value pair
- Attributes
  - Sufficiency
  - Mutual existence (do marf-base and SpamRep have corresponding attributes?)
  - Consistent attribute naming

# MARF & SpamRep Structures

```
multipart/report, type=feedback-report
    Human readable MIME part
    message/feedback-report
    message/rfc822 | text/rfc822-headers
```

## RFC 3462:

“The syntax of Multipart/Report is identical to the Multipart/Mixed content type defined in [MIME]. When used to send a report, **the Multipart/Report content-type must be the top-level MIME content type for any report message.** The report-type parameter identifies the type of report. The parameter is the MIME content sub-type of the second body part of the Multipart/Report.”

```
multipart/related
    application/vnd.oma.spamrep+xml
        <SpamRepDocument>
            <SpamReport> ... </SpamReport>
            <SpamReport> ... </SpamReport>
            .
            .
            .
            <SpamReport> ... </SpamReport>
        </SpamReportDocument>
        [corpus in MIME format]
        [corpus in MIME format]
        .
        .
        .
        [corpus in MIME format]
```

# Structural of MIME Parts: Convergence Options

## Single-report message options

### *Common report MIME type*

*multipart/report, type=converged-feedback-report*  
*Human readable MIME part*  
*message/feedback-report/vnd.oma.spamrep+xml*  
*[message/rfc822 | text/rfc822-headers | other MIME]*

### *modified SpamRep*

*multipart/report, type=spamrep*  
*Human readable MIME part*  
*vnd.oma.spamrep+xml*  
*[Message in some MIMEtype]*

### *marf-base*

*multipart/report, type=feedback-report*  
*Human readable MIME part*  
*message/feedback-report*  
*[message/rfc822 | text/rfc822-headers]*

## Multiple-report message options

### *Extend multipart/report MIME type*

*multipart/report, type=multi-report*  
*Human Readable “this is a few reports”*  
*multipart/digest*  
*multipart/report (e.g., SMS or marf-base)*  
*multipart/report*  
*...*  
*multipart/report*

### *New multipart/multi-report MIME type*

*multipart/multi-report*  
*Human Readable “this is a few reports”*  
*multipart/digest*  
*multipart/report (e.g., SMS or marf-base)*  
*multipart/report*  
*...*  
*multipart/report*

Unofficial OMA request for IETF MARF WG guidance:

*What structure(s) might SpamRep use to facilitate SpamRep/marf convergence?*

# Representation Scheme: XML vs Name/Value Pairs

- Which is better, XML or name/value pairs?
  - XML is more powerful, but is it preferred?
  - Name/value pairs already implemented and used for email
- Convergence options
  - Cap use of name/value pairs, grow XML
    - Specify name/value pairs for email only
    - Specify XML for email, IM, SMS and MMS
  - Specify alternative representations: name/value and XML
    - Should be defined to support automatic translation/migration

# Attribute Issues

- Is there a sufficient set of attributes to ensure compatibility/convergence?
  - Are Report-ID, Reporter-ID, and Message-ID needed in marf-base's 2<sup>nd</sup> MIME part?
    - What happens if a server receives multiple versions/copies of a single report and treats them as independent reports?
      - Scrub SpamRep attributes and attribute names for compatibility with marf
  - Mutual existence (do marf-base and SpamRep have corresponding attributes?)
  - Should Detection Information be added? (possibly as a V 2.0 feature)
  - Add missing 'ReportedMessageProtocol' field(s)
    - Should both format and transport be included?
- Consistent attribute naming would be nice
  - But different services use different protocol and format standards having inconsistent names. Should reporting standards be consistent with each other or the services' standards (e.g., RFC 5322 and GSM MAP)
  - For some it is more important that they be consistent across report formats

# Appendix: Roadmaps

# Convergence Roadmap: SpamRep Considerations

- Attributes

- Proceed with SpamRep 'consistency' modifications
  - Scrub SpamRep attributes and attribute names for compatibility with marf
  - Add missing 'ReportedMessageProtocol' field(s) Q: format and/or transport?
  - Introduce detection information (perhaps a V2.0 feature)

- Structure

- Adopt multipart/report Content-Type for Spam Reports  
(but not for action requests or quarantined messages list)
- Either:
  - define a new multipart/report MIME subtype  
(e.g., 'type=vnd.oma.spamrep')
  - extend/register some multipart/report subtype to allow either XML  
or name/value pair usage  
(including application/vnd.oma.spamrep+xml and message/feedback-report)

# Convergence Roadmap: MARF Considerations

- Attributes
  - Scrub for and include missing ID attributes, e.g., {Reporter, Message, Report}
    - Don't assume that they may be extracted from headers/transport
    - Add missing 'ReportedMessageProtocol' field(s) Q: format and/or transport?
    - Introduce detection information (perhaps a V2.0 feature)
- Structure
  - Consider making 3<sup>rd</sup> MIME part in optional in marf-base
  - Facilitate multiple reports per message
    - Either as proposed in this document, or
    - By some other converged method
- Scheme
  - Cap use of name/value pairs (for email only)???
  - Extend with XML for all message services???