RID IETF Draft Update

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9 November 2005

This work was sponsored by the Air Force under Air Force Contract Number F19628-00-C-0002.

Report Documentation Page

Form Approved
OMB No. 0704-0188

1. REPORT DATE	2. REPORT TYPE	3. DATES COVERED
09 NOV 2005		**00-00-2005 to 00-00-2005**

4. TITLE AND SUBTITLE	5a. CONTRACT NUMBER
RID IETF Draft Update	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)	5d. PROJECT NUMBER
	5e. TASK NUMBER
	5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **Massachusetts Institute of Technology,Lincoln Laboratory,244 Wood Street,Lexington,MA,02420-9108**	8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSOR/MONITOR'S ACRONYM(S)
	11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release; distribution unlimited

13. SUPPLEMENTARY NOTES

14. ABSTRACT

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT **unclassified**	b. ABSTRACT **unclassified**	c. THIS PAGE **unclassified**	**Same as Report (SAR)**	**12**	

RID Updates

- Purpose
- RID and INCH
- Generalizing RID draft
  - Communication flow for all IODEF documents
  - Transport in a separate document
- Message Format for RID
- Updates to the RID Extensions to IODEF Model
- Communication Mechanism for RID Documents
- RIDPolicy Comments

Real-time Inter-network Defense (RID)

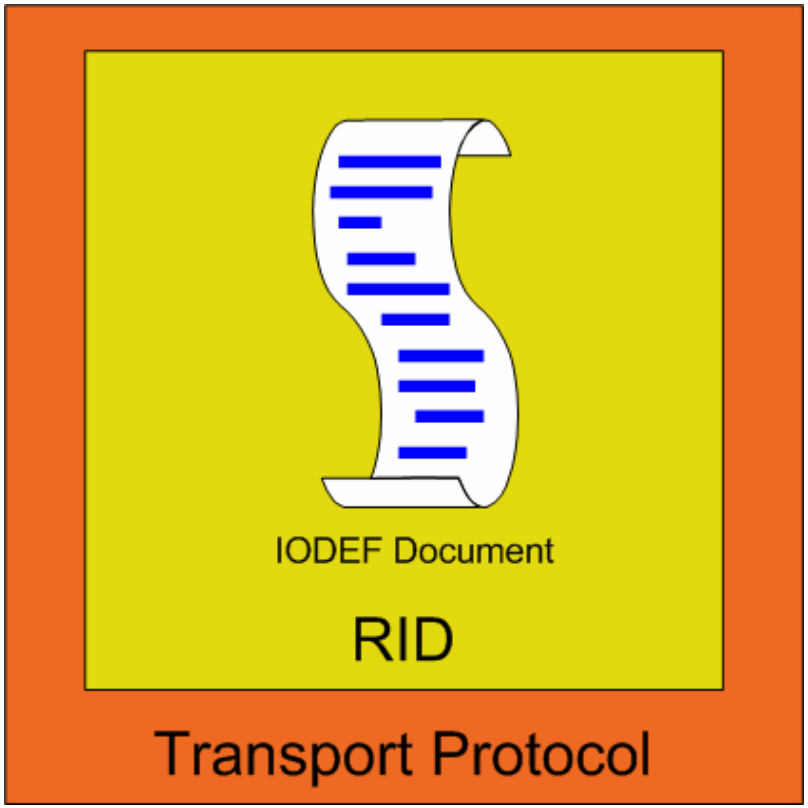
- Facilitate Communication of IODEF documents between Network Providers (NPs) and CSIRTs
- Report incidents to NPs or CSIRTs
- Trace Security Incidents to the Source
- Stop or Mitigate the Effects of an Attack or Security Incident
  - Integrate with existing and future network components
    - Intrusion Detection Systems
    - Systems to trace traffic across a network
    - Network devices such as routers and firewalls
- Provide secure means to communicate IODEF documents
  - Consortiums agree upon use and abuse guidelines
  - Consortiums provide Public Key Infrastructure to support encryption and digital signing requirements

Generalization of RID for IODEF

- RID is used to communicate security incident handling information between CSIRTs or Network Providers (NPs)
- RID initially intended for:
  - Reporting and tracing security incident information to a RID system close to the attack source
  - Integration with traceback systems
    - For the case where traffic may have been spoofed
  - Method to stop attack traffic close to the source
- The generalization of RID will specify
  - Communication flow of all IODEF documents
  - This involves adding one more message type for the reporting of a security incident for statistics with no further actions to be taken
    - Report message type added to RIDPolicy
- Major document updates are text changes and the ability to send an incident report with no required action

- Are there any other cases that are not yet covered?

RID Envelope for IODEF

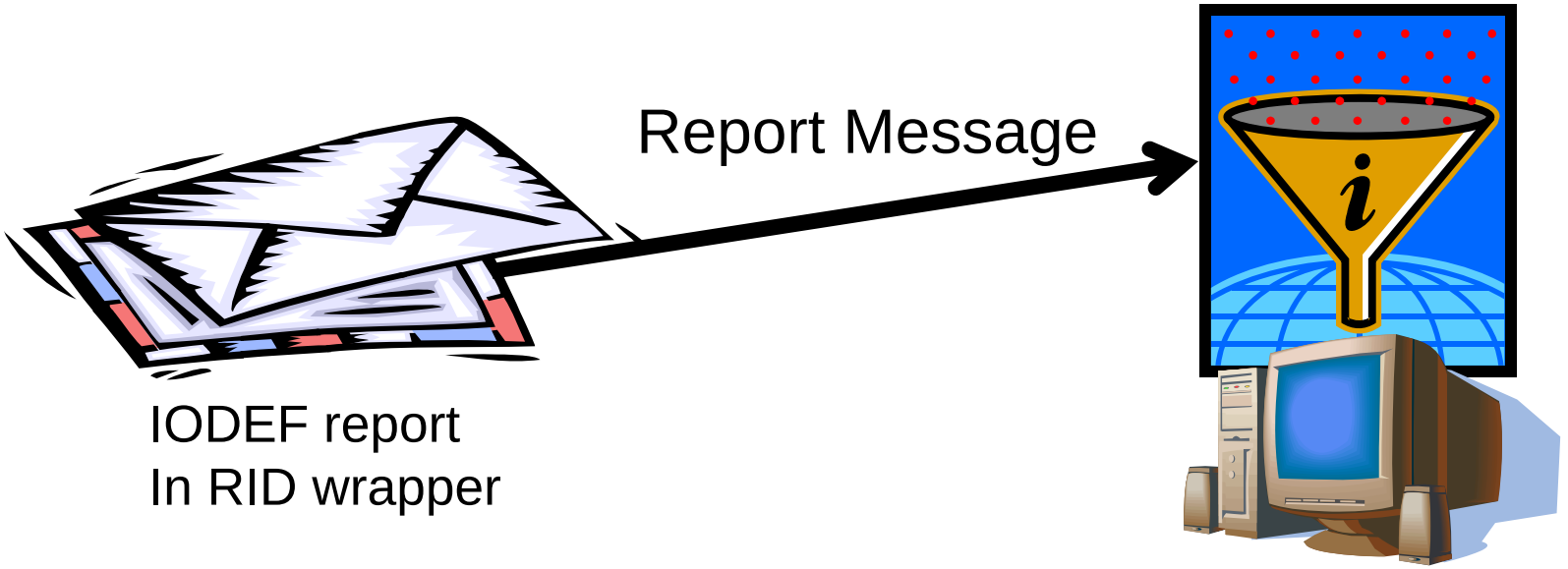


- All IODEF documents are enveloped in RID
- Facilitates communication of IODEF documents and sets purpose
  - Reporting
  - Investigation where source is known
  - Trace request
- The transport protocol will be defined in a separate document
  - SOAP and HTTPS

Communicating RID Messages

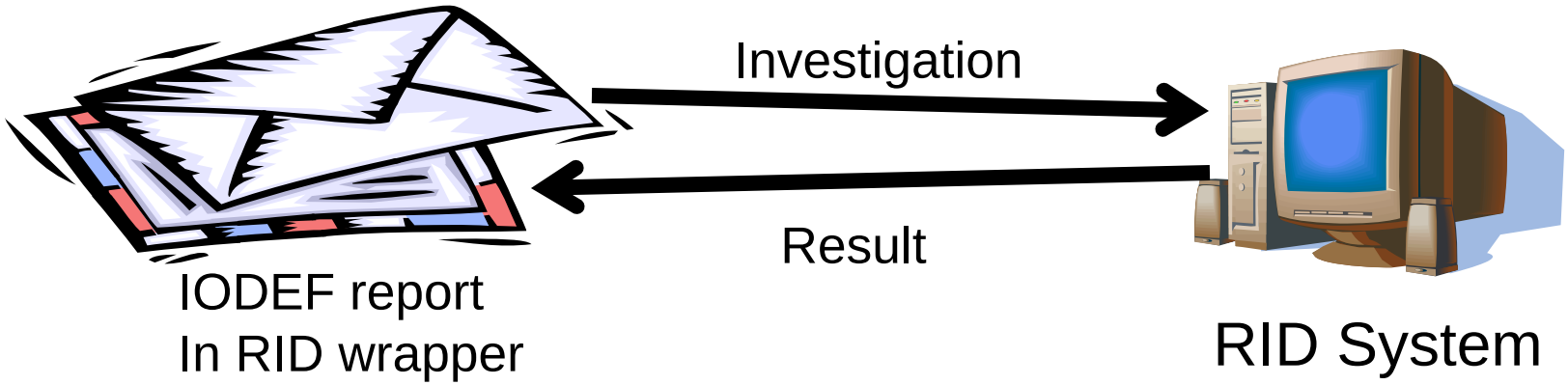
- RID serves as the message wrapper for all IODEF documents
- RID defines the communication flow of all IODEF documents using the defined RID message types
- Message Types
  - Trace Request
    - Requires integration with traceback systems to identify upstream source
  - Trace Authorization
    - Traceback approval status in upstream provider's network
  - Result
    - Actions will be expanded in Data Model to support necessary options
  - Investigation
    - Incident Investigation for attack mitigation with a known source
  - Report
    - Statistics – no action necessary
- RID Systems Must Track the Requests by
  - Incident Number and Instance ID
    - The incident@ID will be moved to RIDPolicy from the data model
  - Packet Contents
  - Completion Status

Report Message



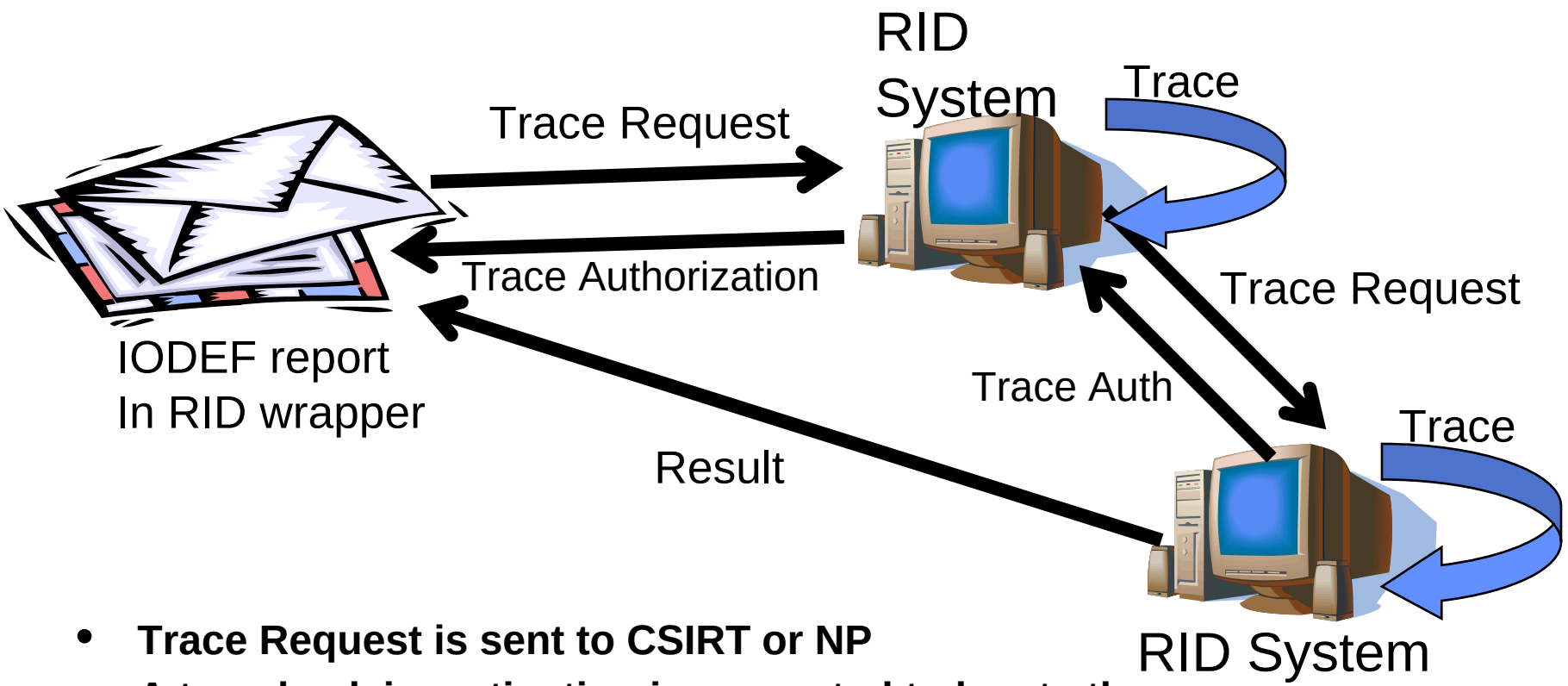
- **Report is sent to CSIRT or NP**
- **No action is necessary for this message type**
- **Used for statistics and generating trending information**
- **Transport will use TCP (HTTPS), so there is no response necessary**

Investigation Message



- **Investigation message is sent to CSIRT or NP**
- **An Investigation is requested where the source is known**
- **Purpose is to mitigate or stop the attack traffic**
- **A response via the Result message is required**
  - **Details the action(s) taken**

Trace Request Message



- **Trace Request is sent to CSIRT or NP**
- **A traceback investigation is requested to locate the source**
- **All upstream trace requests must decide if trace will be authorized**
- **Purpose is to mitigate or stop the attack traffic**
- **A response via the Result message is required**
  - **Details the action(s) taken**

Transport in a New Draft

- Draft will define the transport protocol for all IODEF documents
- RID will define the message communication flow and the transport document will discuss SOAP and HTTPS for transport
- XML Security
  - Policy negotiated in RID message and not wrapper
  - Provide integrity, authentication, authorization
  - XML digital signature, encryption, and public key infrastructure

    Encryption of RID for privacy and security reasons should be via XML encryption and not through the security provided by a wrapper or higher level protocol
- SOAP Messaging Wrapper
  - Method to transport messages
  - HTTPS will be the mandatory protocol for implementation

    Not necessarily the most efficient transport for the IODEF messages, but was agreed upon by WG for ease of initial implementation
  - Other protocols may be added for optional support

RID Policy

- RID Policy
  - Ensures policy information is transferred between participating RID peers
  - Policy information in RID to prevent policy related issues from relying on the transport mechanism for enforcement
  - Message type is specified in the RIDPolicy class
- RIDPolicy Information
  - Extension to define the type of trace
    - IODEF Method and Impact class information should be considered for the type of traffic requested for trace and the success of an attack
    - Explicit statement for the type of trace requested in case it does not fit into the category of attack traffic and can be linked to a CVE or other identifier
  - Identifies where the traffic may have policy issues
    - Client to NP
    - NP to client
    - Within a consortium
    - Between peers
    - Between consortiums
    - Across national boundaries
- Purpose is to try to prevent abuse of the system
  - Address security, confidentiality, and privacy concerns listed in the draft
  - New extension created to address issues raised at IETF-59

- **Any comments on RIDPolicy?**

Summary

- Updates from the previous version
  - RID generalized to support transport of all IODEF documents
  - RID Schema and examples have been updated
  - Document formally edited

- Current Draft
- http://www.ietf.org/internet-drafts/draft-ietf-inch-rid-05.txt