

# IPFIX Mediation: Framework

<draft-ietf-ipfix-mediators-framework-01.txt>

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# Background

- ❖ WG draft in IETF71 approved.
  - Based on IPFIX Mediator model draft.
- ❖ Submitted as WG draft version 00 in IETF 72.
  - Received following comments:
    - Needs reorganization based on IPFIX ARCH draft.
      - ➔ Reorganized it and added a high level figure.
    - Needs to remove the guideline of IPFIX Mediator protocol section.
      - ➔ Improved this section.
    - Needs to change the positions of IPFIX File Writer/Reader equivalent to that of Exporting/Collecting Process.
      - ➔ Improved.
- ❖ New Milestone: June 2009, submit to IESG.





# Document Outline

Wording changed.

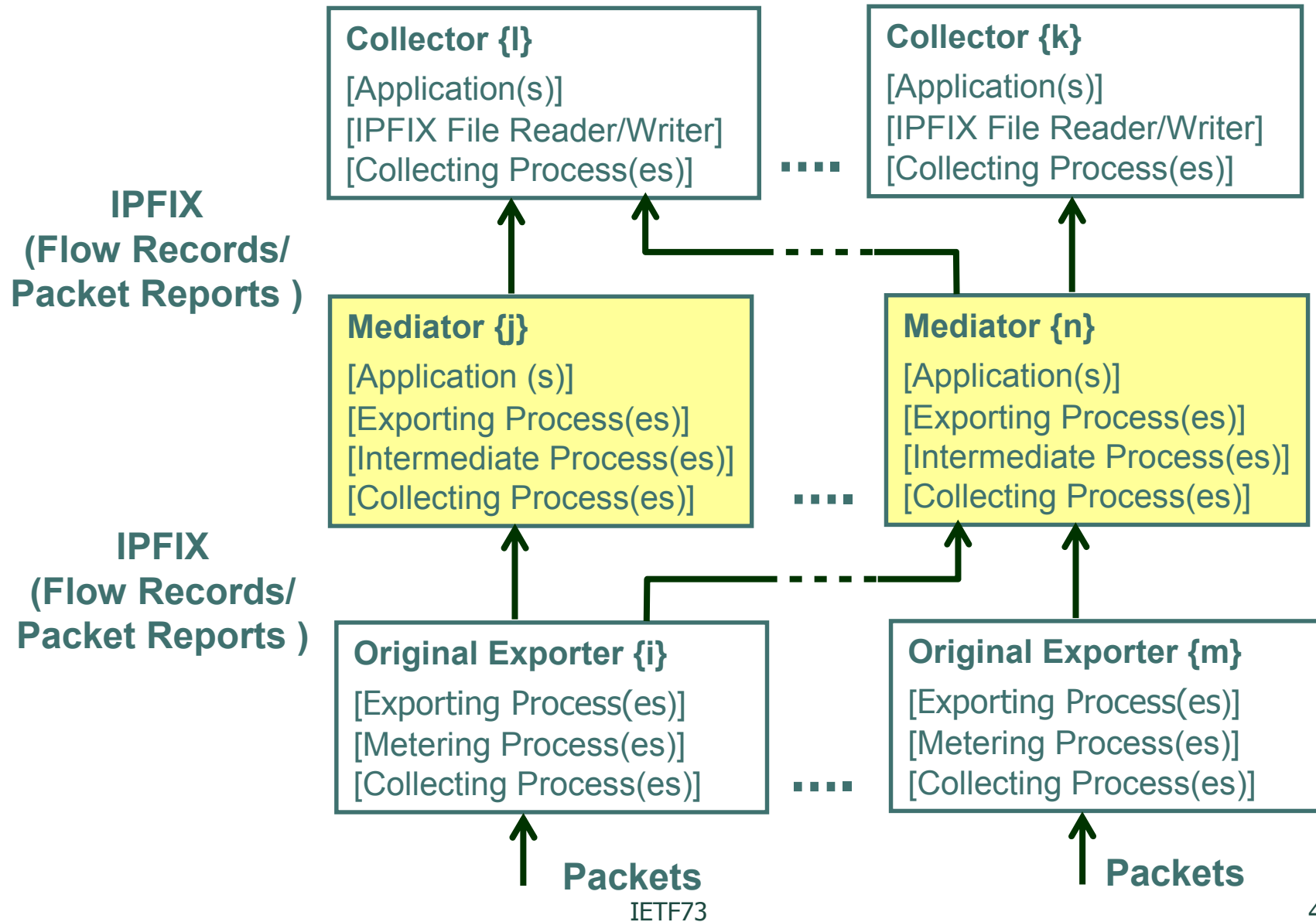
The related terms in IPFIX/  
PSAMP are put in section 2.

**+ New section**

**+ New subsection  
and wording**

1. Introduction
2. Terminology
3. **IPFIX Mediation Reference Model** 
4. IPFIX Mediation Functional and Logical Blocks
  - 4.1. Collecting Process
  - 4.2. Exporting Process
  - 4.3. Intermediate Process
    - 4.3.1. Flow Selection Function
    - 4.3.2. Flow-based Collector Selection Function
    - 4.3.3. Aggregation Function
    - 4.3.4. **Correlation Function** 
    - 4.3.5. Modification Function
  - 4.4. IPFIX File Writer/Reader
  - 4.5. **Flow Expiration** 
  - 4.6. **Information Model** 
  - 4.7. **Examples**
5. Security Considerations

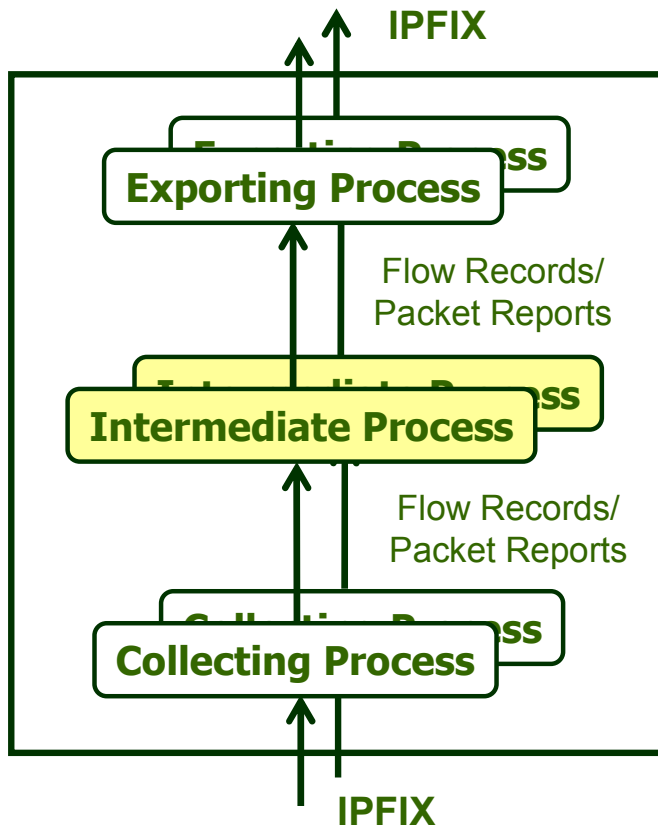
# IPFIX Mediation Reference Model



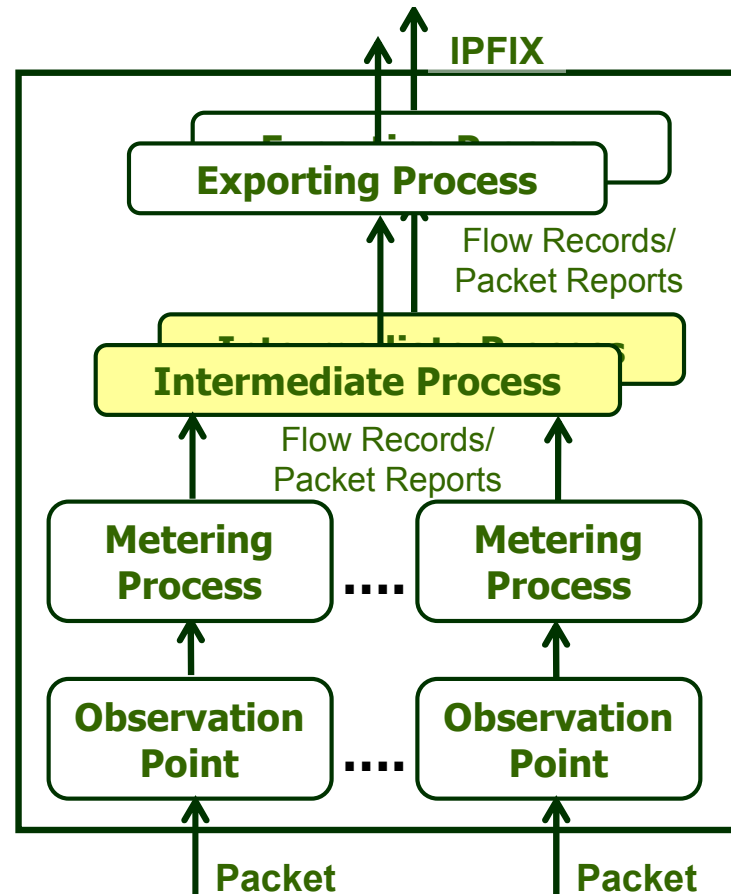
# Basic Component Model

- ❖ IPFIX Mediation can be included in any device

**IPFIX Mediator**



**Original Exporter with IPFIX Mediation**



# Flow Expiration

- ❖ Aggregation needs expiration conditions that are similar to that of Metering Process
  - when there are no input Flow Records/Packet Reports belonging to a cached Flow for a certain time period.
  - when resource constraints happen.
  - when Flow time-out expires on a regular basis or on the basis of some expiration policy.
- ❖ Note: while using Correlation function, cached Flow Records/Packet Reports may be discarded when they are prematurely expired.
  - Correlation function cannot compute the correlation when records or reports are expired.

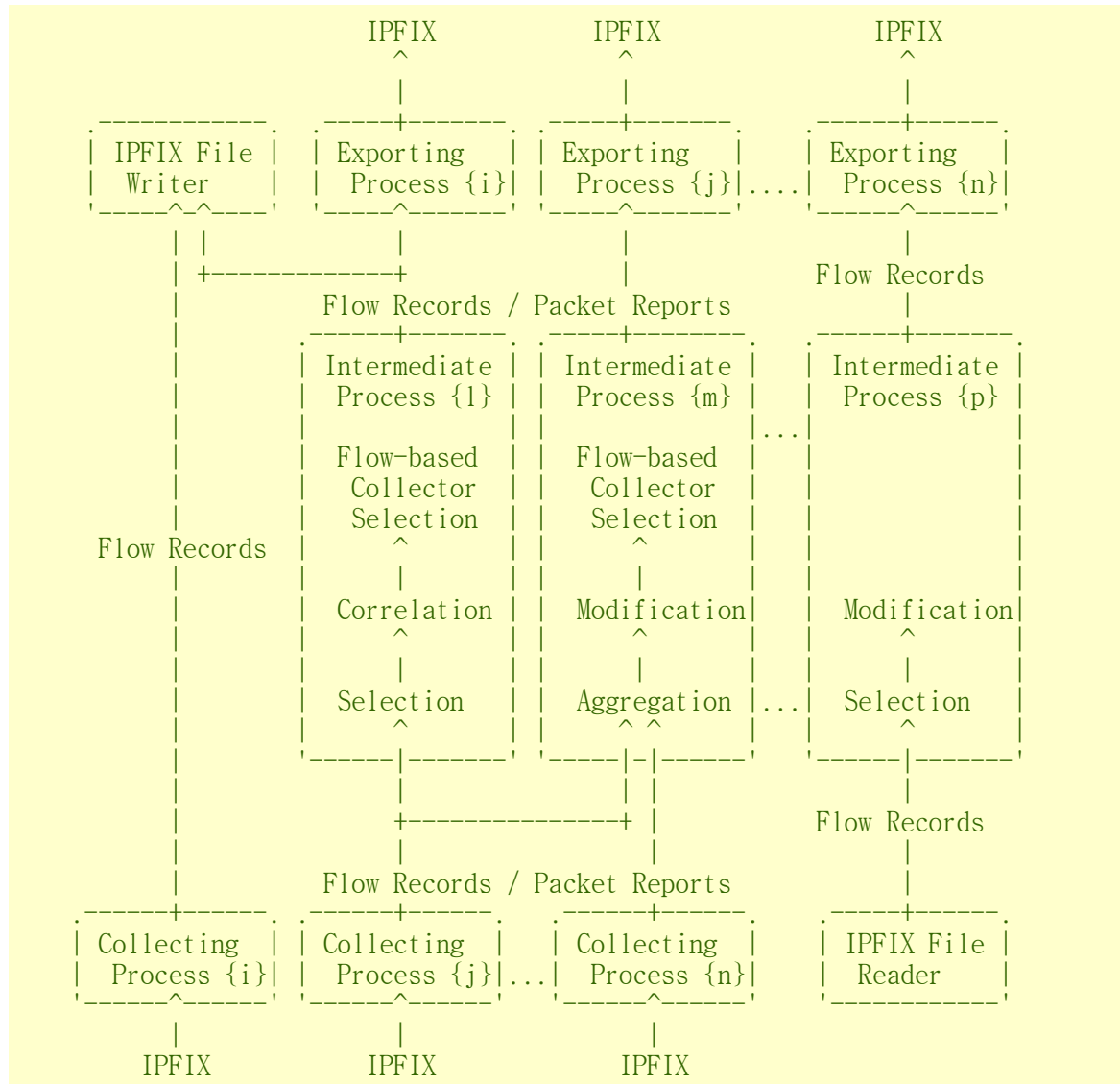
# Information Model

- ❖ IPFIX Mediation reuses the Information model defined in RFC5102.
  - As proposed in “Time Composition” of IPFIX mediation framework, the following new information elements are needed.

ID	Name	ID	Name
XXX	averageBitRate	XXX	averagePacketsRate
XXX	minimumBitRate	XXX	minimumPacketsRate
XXX	maximumBitRate	XXX	maximumPacketsRate

- ❖ Are other Information Elements needed?

# Functional Block Example





# Next Step

- ❖ Ensure the text is consistent with both IPFIX and PSAMP documents.
- ❖ Ensure the text is consistent with any IPFIX Devices with IPFIX Mediation function.
  - Metering Processes, Collecting Processes and IPFIX File Readers can send Flow Records/Packet Reports to Intermediate Processes.
  - Intermediate Processes can send Flow Records/Packet Reports to Exporting Processes and IPFIX File Readers.
- ❖ Add definitions for new Information Elements.
- ❖ Address remaining issues and comments from IETF73 and submit this draft in Feb. 2009.