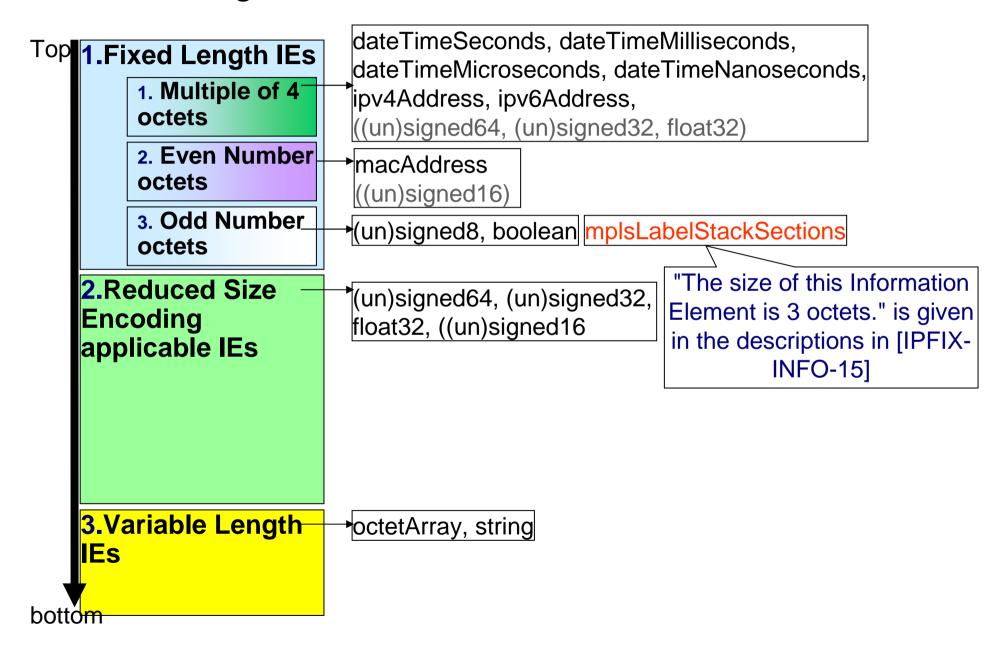
Order of Information Elements Difference Between drafts 01 and 00

NTT Network Service System Laboratories, NTT Corporation

Hitoshi Irino, NTT

- Difference Between Order of Information Element drafts 01 and 00
- Description about Information Element order in each group is deleted
 - This order is equal to description order in IPFIX-INFO
 - for supporting future extensions of information model.
 - for simplifying order rule.
- Applicability section is added
 - Advantage cases of this order rule
 - Multiple exporters send different Templates containing the same required Information Elements to a collector.
 - Templates are collected to create output that has unified data structure
 - Collector records flow (formed in unified data structure)
 - Mediator sends template to collector or upper mediator
- Draft 01 corresponds to changes in definitions of Information Elements in IPFIX-INFO-15

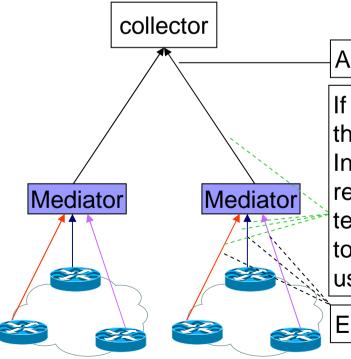
Basic Length Classification Rule (corresponds to IPFIX-INFO-15)



N

Application

- Case where Information Element Order works effectively
 - □ Exporter sends different templates containing same IEs,
 - Collecting process creates output that has unified data structure.
 - □ e.g., IPFIX Mediator (Concentrator)



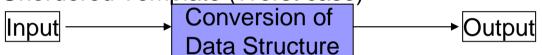
A converted unified Template.

If these templates are formed using same IE order, the Mediator can simplify conversion of data structure. In particular, when these templates contain only required IEs (also these sizes are same as other templates containing IEs), the Mediator does not need to convert the data structure when these are formed using same IE order.

Exporters use different Templates.

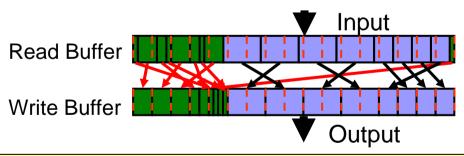
NTT Network Service System Laboratories, NTT Corporation Compare speed of processing of 2 types of Templates

- Comparison between best case and worst case (on software simulation)
- Input: Data records using
 - Templates that contain IEs corresponding to NFv5 fields
- Output: Data records using
 - **Ordered Template**
- Case 1: Ordered Template (Best case)
- Case 2: Unordered Template (Worst case)



- Ordered Template
 - The number of copy operations decreases.

Input Read Buffer Write Buffer Output **Unordered Template**



- Speed of processing Ordered Template is 14%* faster than that of unordered template.
- Efficiency increases when any order rule is defined.

^{*}Environment: Xeon 3.0.6GHz, Memory 2GB