

# *Collusion Detection*

## *Las Vegas Style*



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*Casinos*

*Computer  
Security*

# *Fraud Statistics*

“ ... employees steal approximately \$400 billion from American businesses each year.”

*U.S. Chamber of Commerce*

# *Card Counting Bet Strategy*

**Count**

**-2**



**Count**

**+1**



**Count**

**+4**



**Count**

**+6**



# *Game Integrity Protection*

- Hiring standards
- Policies and procedures
- Training
- Surveillance/Security
- Shared intelligence
- Internal audits
- Background check updates

# COLLUSION DETECTION

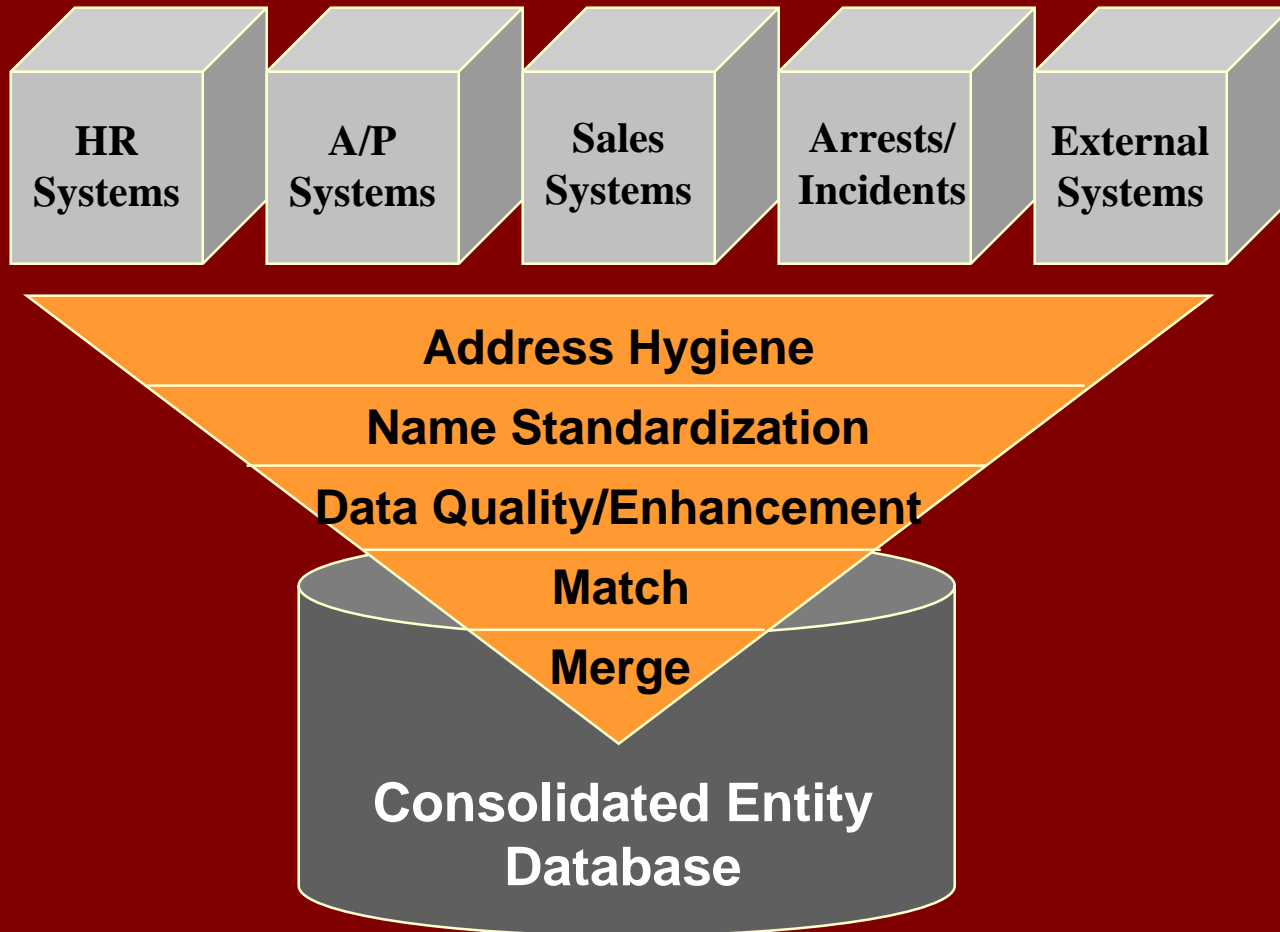
# *Consolidated Database*



**Desired Entities**

**Undesired Entities**

# *Collusion Analysis Processing*



# *Computer Forensics*

**Problem:** Very large data bases

Files hidden in commercial files

**Solution:** Hash all known commercial files

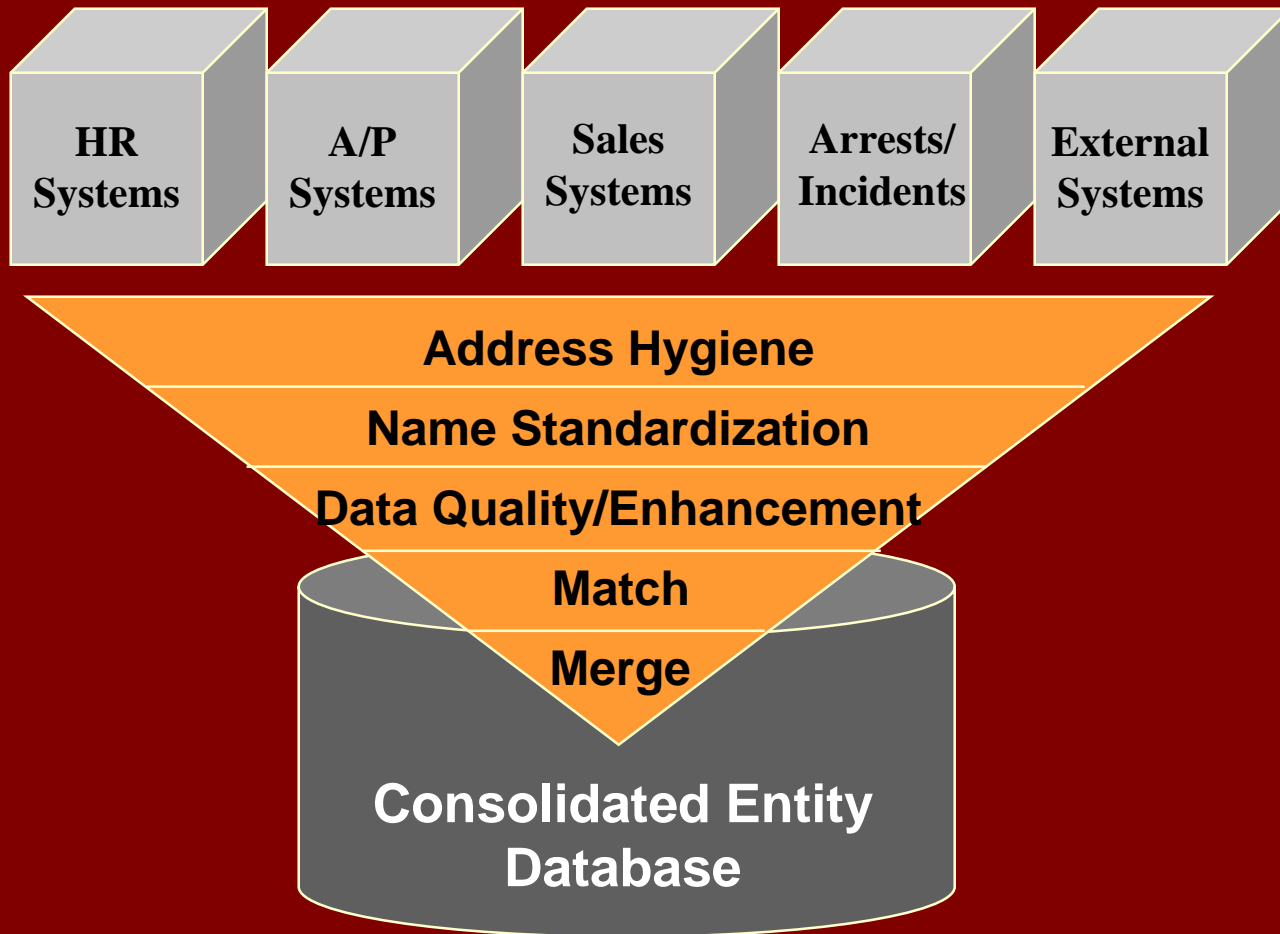
Hash all files on captured system

Compare hash results

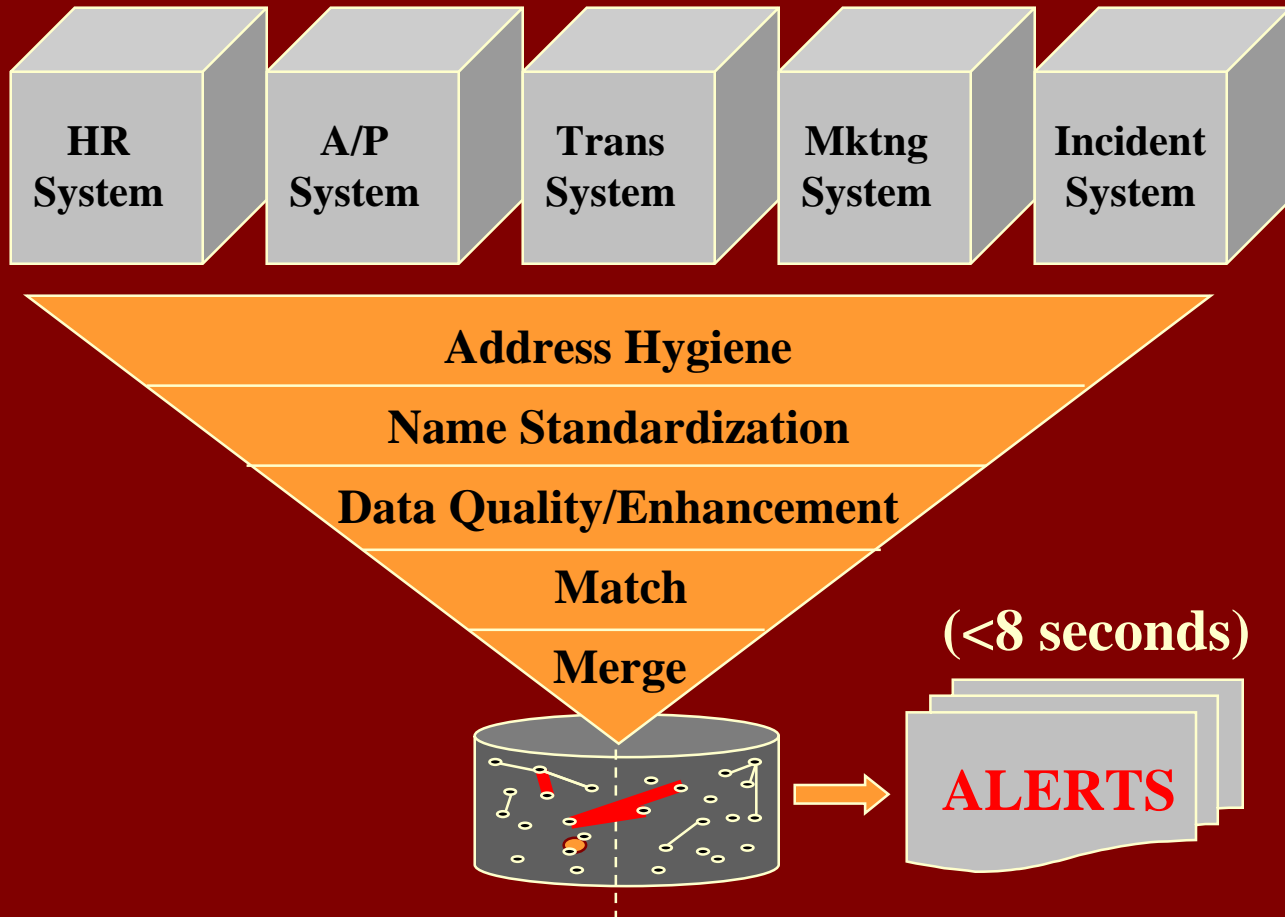
**Results:** If file hash equals, file is OK

Profitable subscription-base business

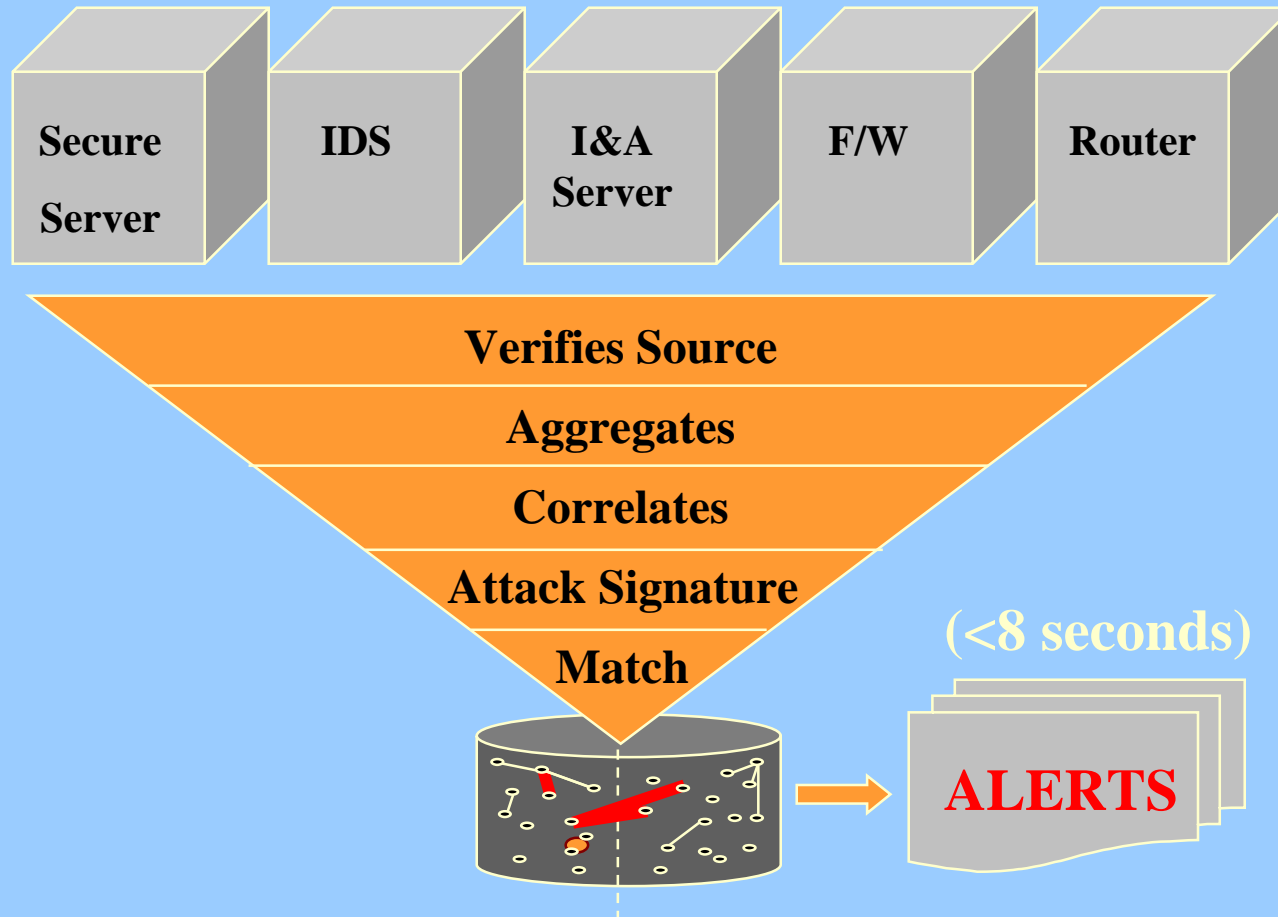
# *Collusion Analysis Processing*



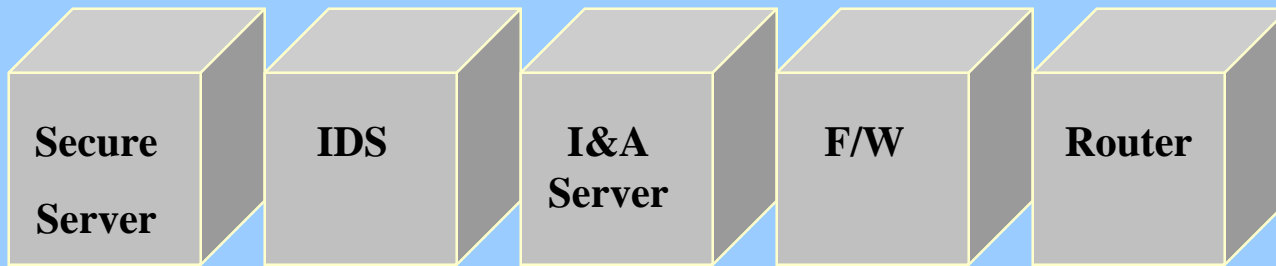
# *Near Real-Time Analysis*



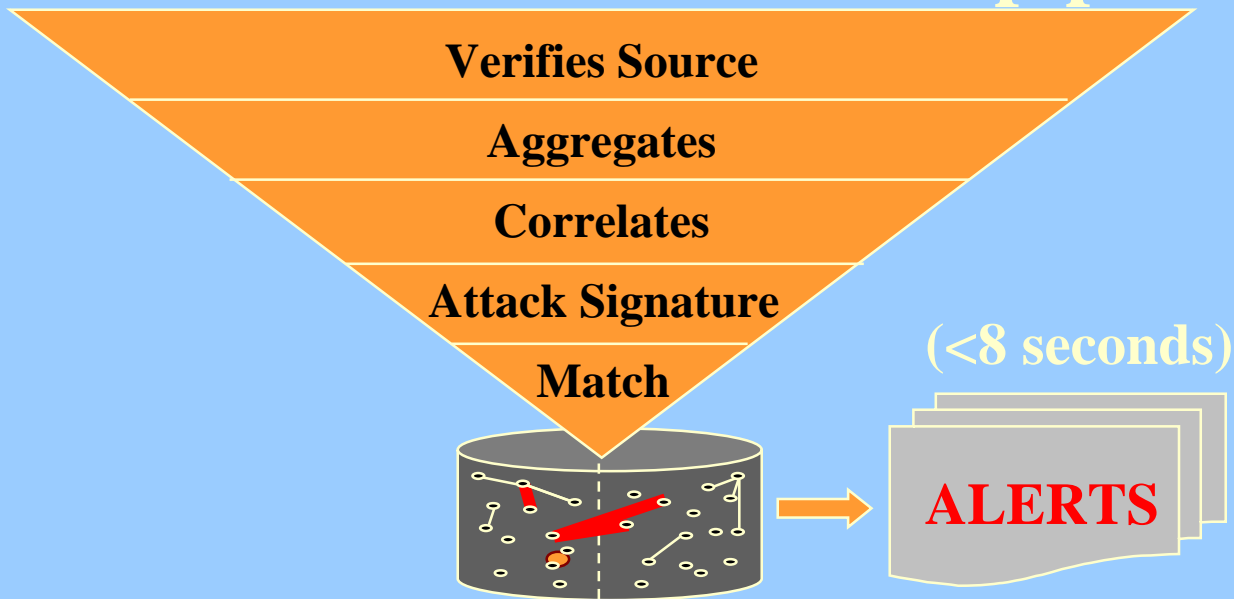
# *Near Real-Time Incident Detection*



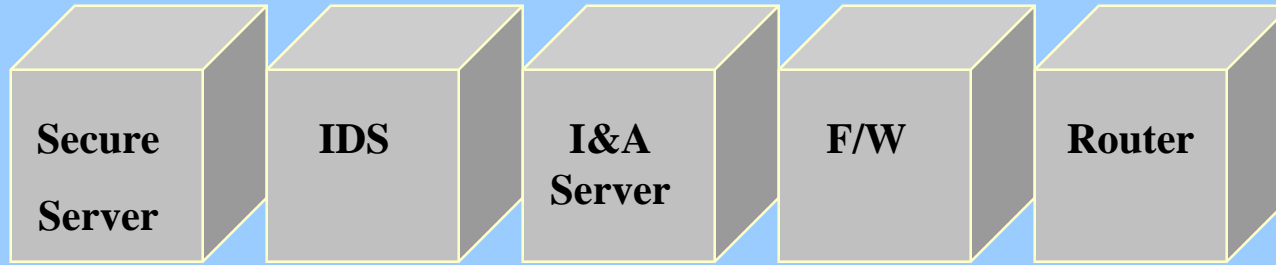
# *Near Real-Time Incident Detection*



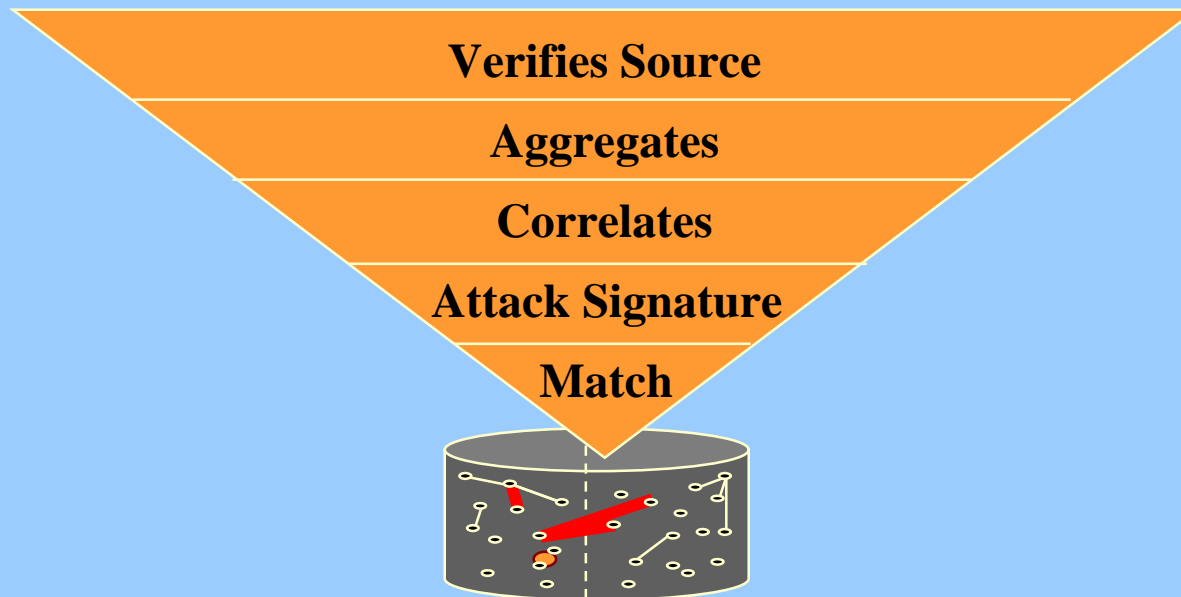
## Problem with formats and pipes



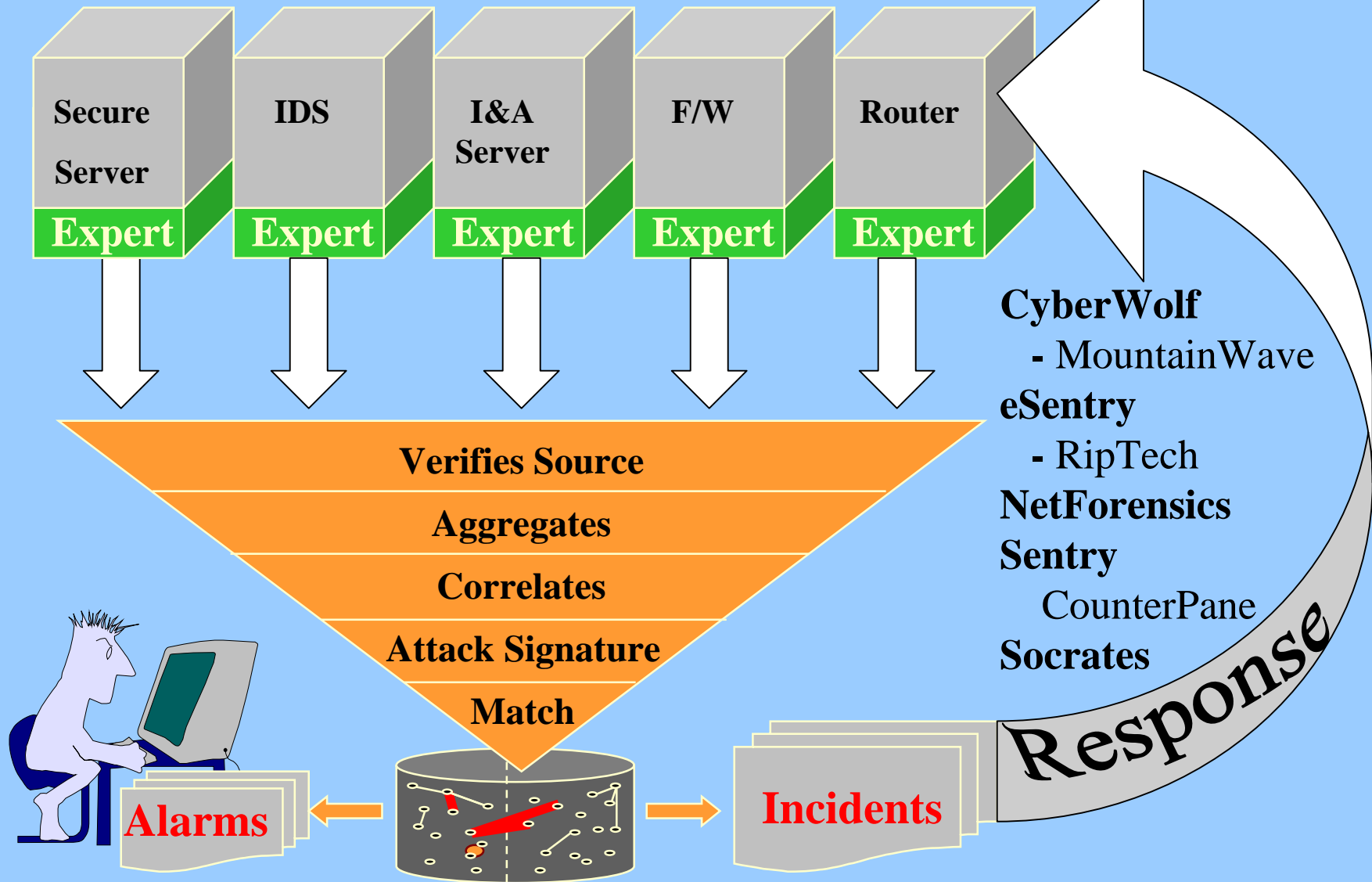
# *Problem*



## Problem with formats and pipes

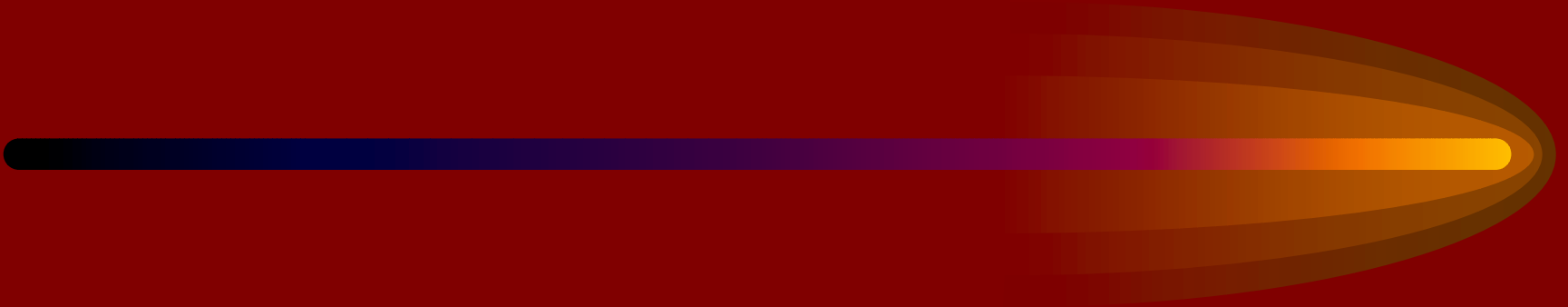


# Expert Devices



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## **Jim Litchko's Bio:**

Mr. Litchko is a senior information systems security specialist with over twenty-five years experience assessing and developing information system security (INFOSEC) solutions for computer and network systems. He has held senior executive positions for special projects and business development at the two largest commercial INFOSEC companies, Secure Computing Corporation and Trusted Information Systems and the enterprise integrator, Telos, all internationally known for advance INFOSEC research and development, consulting, and network security products. During his twenty-year career as a Navy cryptologist, Mr. Litchko spent his first six years supporting operations on naval combatants and air reconnaissance platforms in the Atlantic, Pacific, and European theaters. Mr. Litchko's last five years in the Navy were in staff and technical positions in the National Security Agencies (NSA) INFOSEC Directorate and the National Computer Security center (NCSC). His last position was Staff Chief for the Director of the NCSC. Since 1988, he has been an instructor for systems and network security for Johns Hopkins University, MIS Training Institute and the National Cryptologic School. He has also given INFOSEC presentations to Congressional staffs, Gartner Group, Conference Board, Price Waterhouse, Exxon, Freddie Mac, National Industrial Security Association, Computer Security Institute (CSI), National Computer Security Association (NCSA), Defense Intelligence University, and Armed Forces Communications and Electronic Association (AFCEA). Mr. Litchko has chaired panels and provided INFOSEC presentations at national, international, and executive conferences. He holds a Masters degree in Information Systems from John Hopkins University and a Bachelors degree in Industrial Technology from Ohio University. He is currently an independent systems and network security consultant.

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