

# **The Uber Data Source: Holy Grail or Final Fantasy?**

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# Poignant Quote

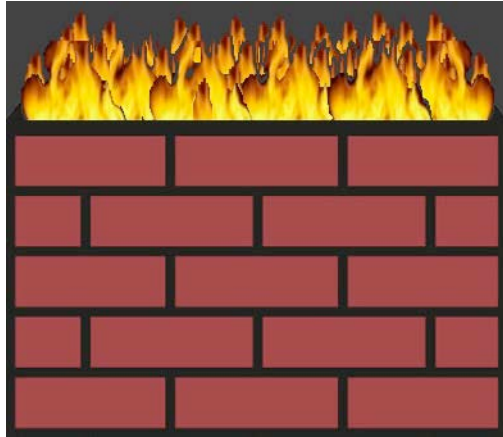
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**"We are drowning in information, but starved for knowledge"**

**--John Naisbitt**



# Which Data Source?



MR. TCPCDUMP



Software Engineering Institute  
Carnegie Mellon

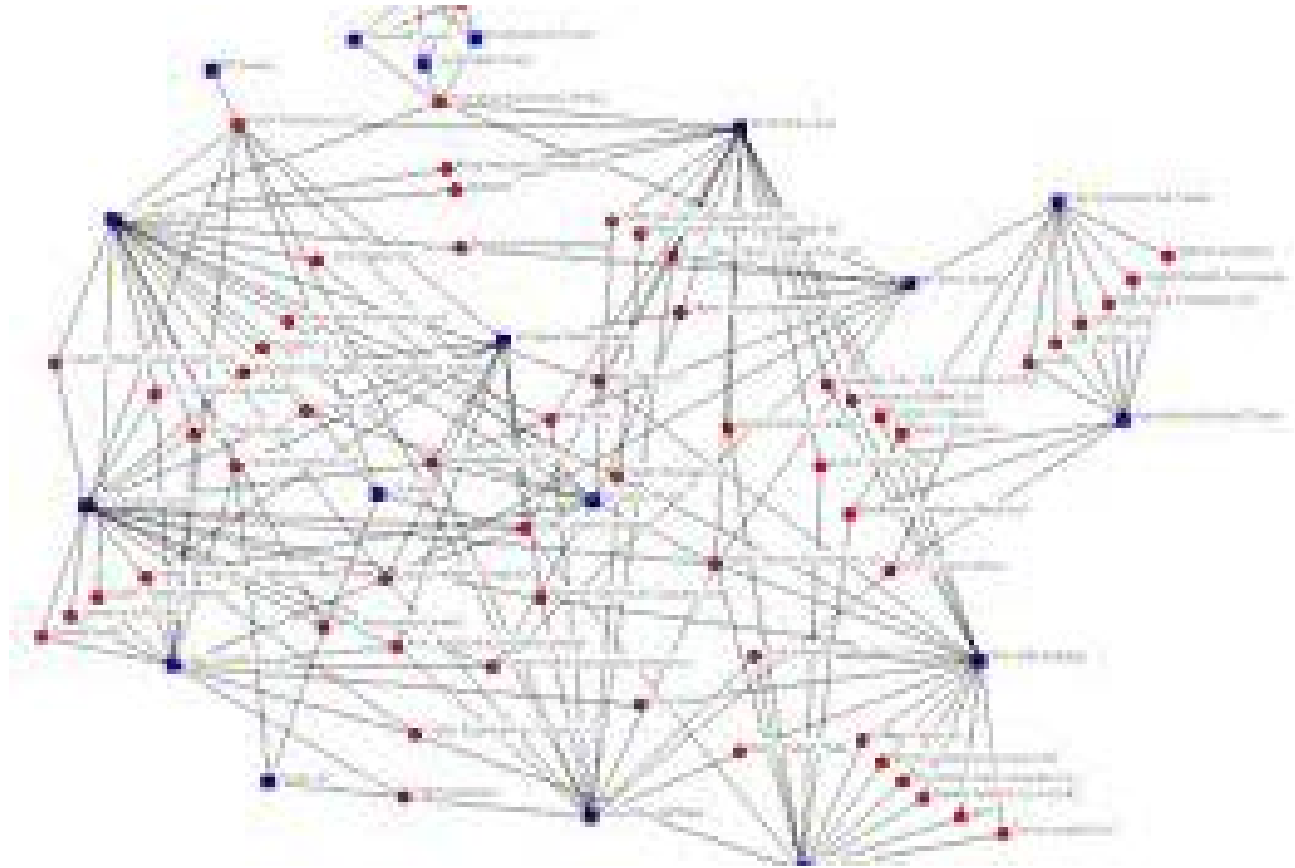


# Unfortunate Reality

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- No one data type gives organizations what they need analytically/forensically/legally
- There is great uncertainty of what data needs to be collected and stored to ensure adequate “network knowledge”
- To play it safe, organizations often collect everything they can
- Each data source has a different value for network monitoring

# Unfortunate Results



# Creates Inefficiencies

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- Causes confusion and inhibits incident response/forensics
- Complicates analytical/operational workflow and obstructs proper network monitoring
- Wastes precious skilled labor (analyst/technical/professional) cycles on data munging/data organization rather than monitoring
- Utilizes extra storage space that could be used instead to increase the length of retention rather than the variety of data stored

# Value Over Volume





# Challenge

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- Organized, well-structured approach necessary for network monitoring success
- Volume and variety of network data make this a challenge
- Is there a better way?

# Uber Data Source?

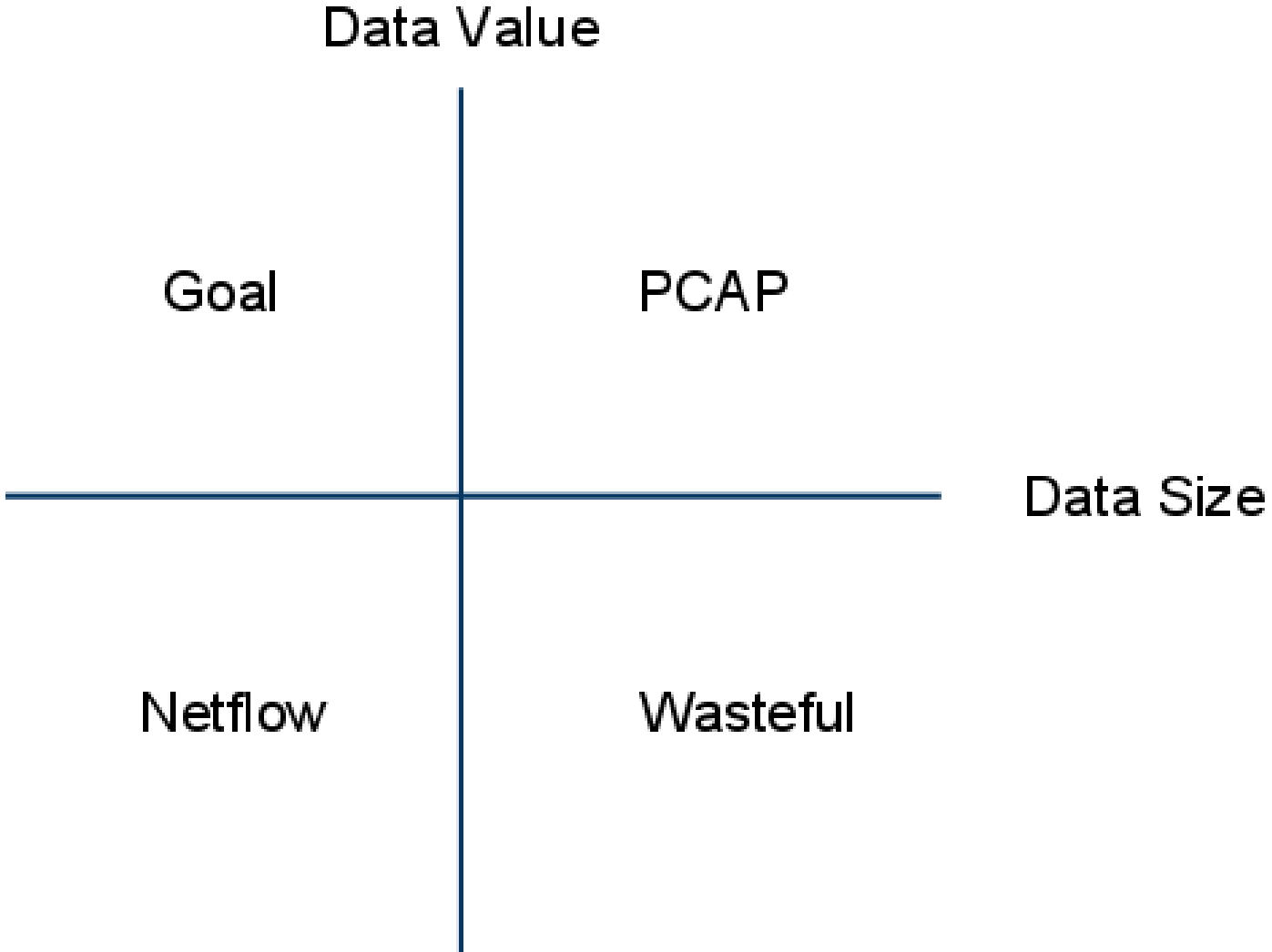
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# Concept

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- Enrich layer 4 meta-data (e.g., netflow) with layer 7 (application layer) data
- Focus on data value instead of data volume
- Identify layer 7 fields that add the greatest value
- Tune the dial appropriately between extremely compact size, but no context and full context, but extremely large size
- For certain protocols, this is already standard practice!
- Generalize to all protocols





# Contact Information

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