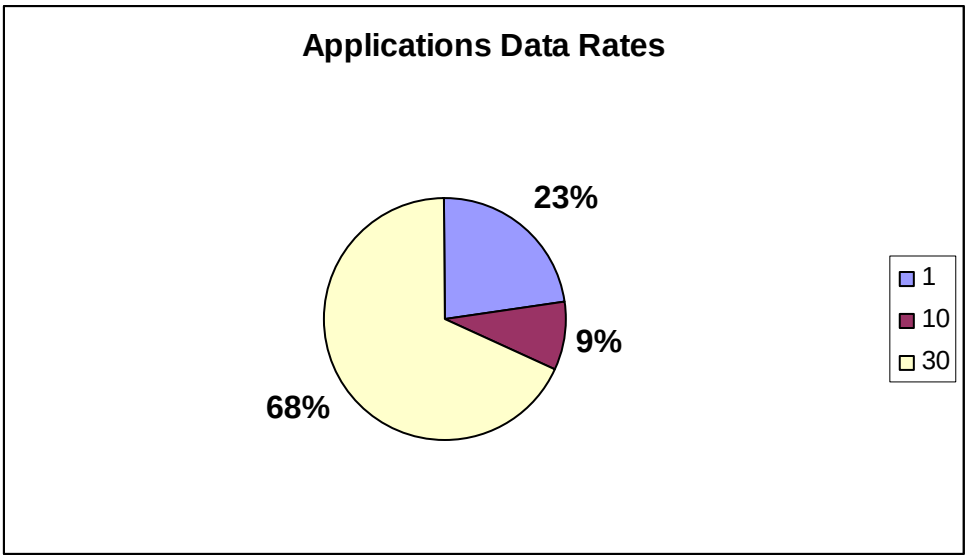
Assessment of Application Taxonomy

This document is an assessment of the Application Taxonomy developed by the Real-Time Task Team led by Terry Bilke.

Data Rate

The following table is a breakdown showing the number of applications requiring various rate rates.

Samples per Second	Count
1	5
10	2
30	15
Grand Total	22

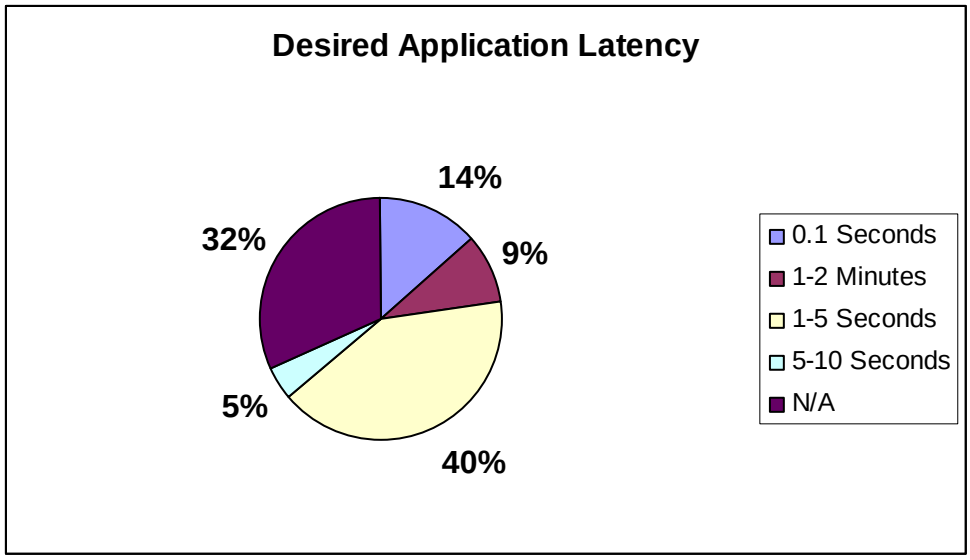


Majority of applications identified today require 30 samples per second data rate.

Data Latency

The following table is a breakdown showing the number of applications requiring various latency rates.

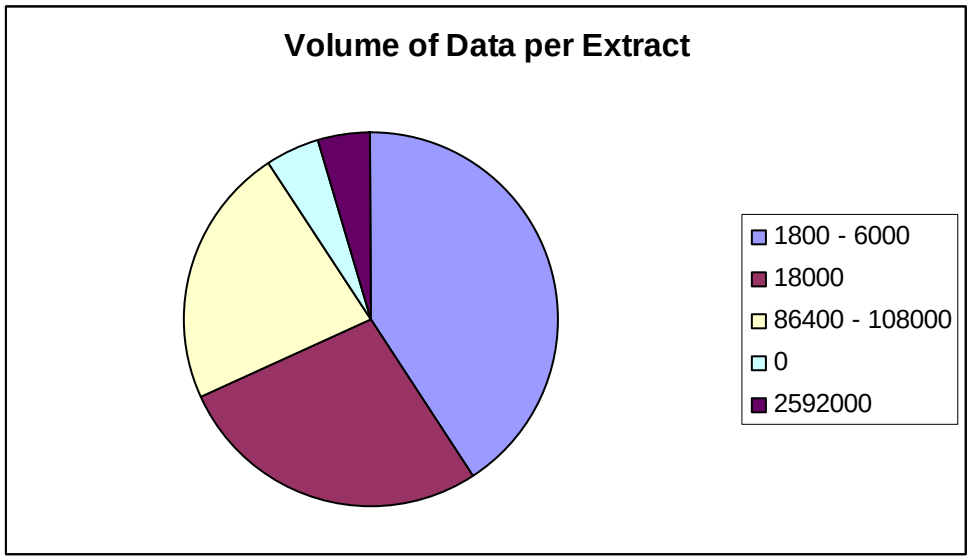
Desired Latency	Count
0.1 Seconds	3
1-2 Minutes	2
1-5 Seconds	9
5-10 Seconds	1
N/A	7
Grand Total	22



Data Extract Size

The following table is a breakdown showing the size of the data extract needed by the application. This was calculated by multiplying the time window times the sample rate.

Extract Size	Count
1800 - 6000	9
18000	6
86400 - 108000	5
0	1
2592000	1



The largest extract is actually a system monitoring application to determine the system health. I don't see this as an appropriate requirement to build the data network for. There are other approaches that probably should be used.

Most Demanding Applications

The following table is a breakdown showing the number of applications requiring various latency rates and the sample rates.

Samples II	0.1 Seconds	1-2 Minutes	1-5 Seconds	5-10 Seconds	N/A	Grand Total
1800 - 6000	2		3	1	3	9
18000	1	1	3		1	6
86400 - 108000		1	3		1	5
0					1	1
2592000					1	1
Grand Total	3	2	9	1	7	22

All of the applications requiring 0.1 seconds latency rates are essentially protection related. For the near term these are out of scope for the DMTT and it is expected that protection applications would be handled through dedicated point to point communication.

The three applications that require 108,000 samples are related to thermal monitoring, voltage stability and finding system anomalies.