SRC Mobility Driver Testing----------------------2/6/2007

Testing performed by Michael Ford
All testing performed with driver version SRX_5_3.
Test Platforms: Gateway MX6214 Laptops w/ Windows XP
Test AP's: Linksys WRT300N and Linksys SRX200

Test Run 1 – Baseline test – Old SRC Driver – No Mobility

This test was performed with our old SRC Driver/Utility set. This was done to show a baseline of before and after testing. This set has no mobility functionality. As you can see the handoff time for switching AP's is well over 4.5seconds (Figure1). This was done under maximum bandwidth load as seen in (Figure2.)
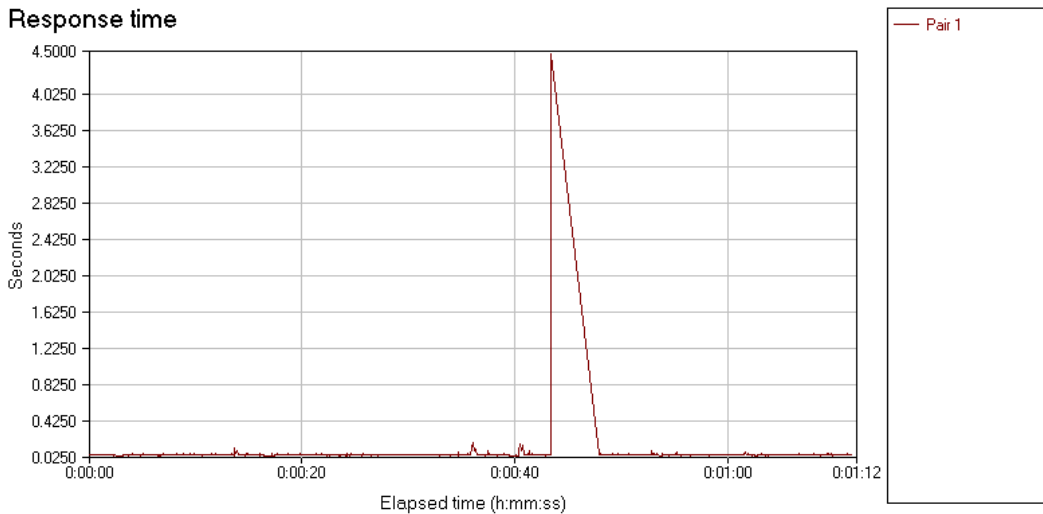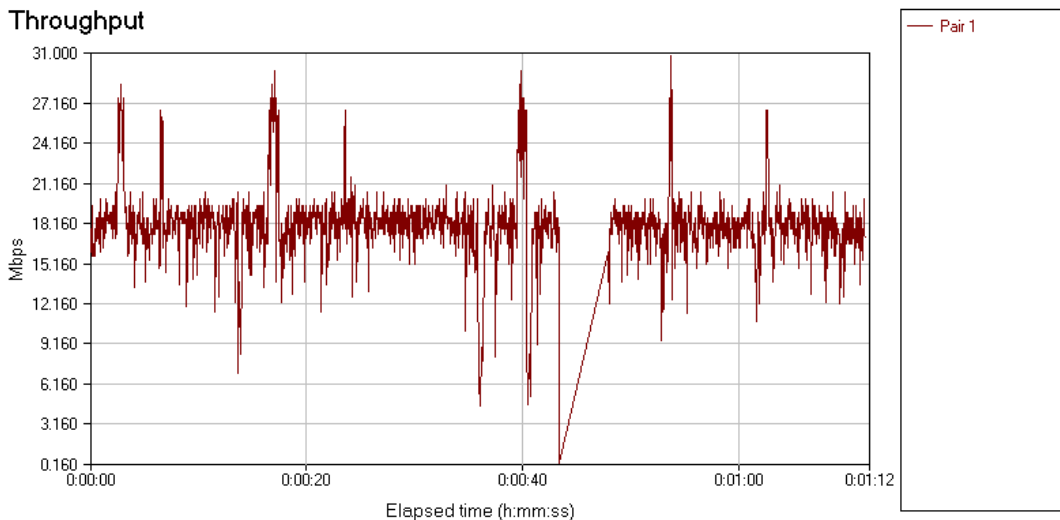

Figure 1

Figure 2

Test Run 2 – SRX New Driver – Low Bandwidth – 5 Handoffs

This test was started by first upgrading our old driver to our latest Mobility driver. This file is SRX_5_3. The test was run under low bandwidth using the file ResponseTime.src under IxChariot. As you can see from the graph (Figure 3) under these conditions Handoff times were down to around 12ms. The throughput averaged 1.113 Mbps (Figure 4). This would be equivalent to an HD Mpeg-3 Stream.
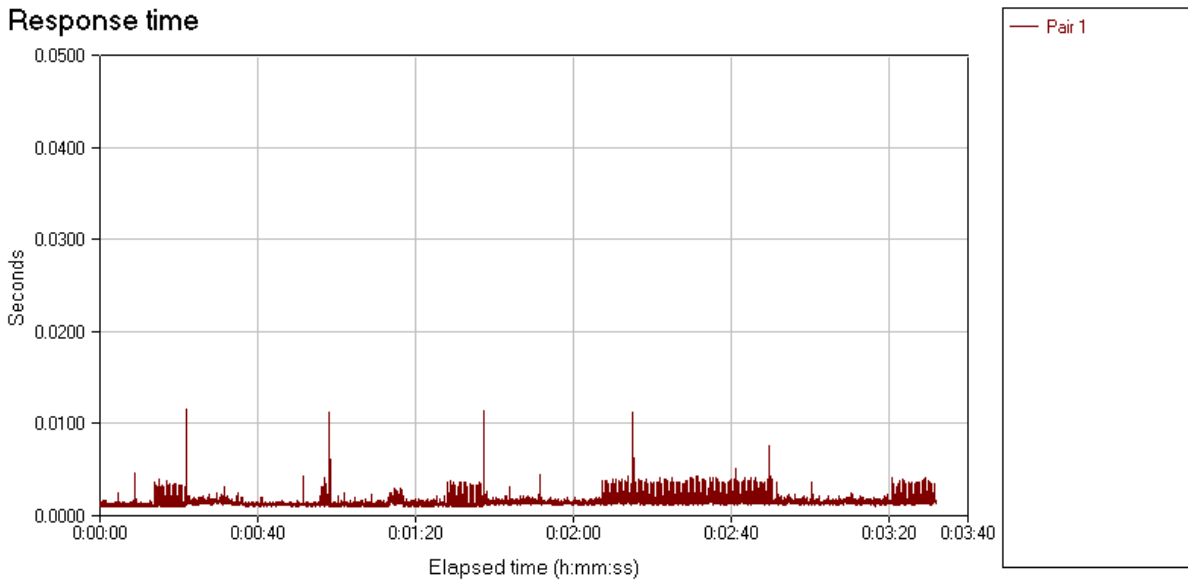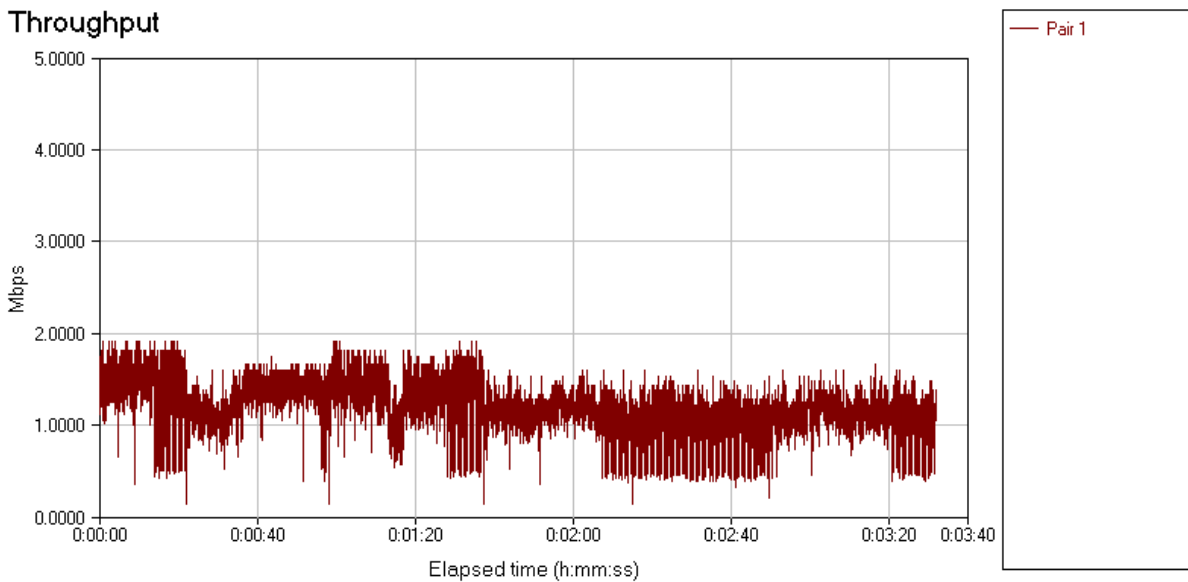
Figure 3

Figure 4

Test Run 3 – SRX New Driver – High Bandwidth – 1 Handoff

As I continued into the study, I next set up a high bandwidth test. This is to show the correlation between traffic load and handoff times to the AP. As you can see at maximum bandwidth, the TCP/IP traffic was at an average of 13Mbps witch does not include its overhead, the handoff time to the AP was significantly increased. The handoff time was around 870ms (Figure 5) at maximum bandwidth (Figure 6). Between the 2 Graphs you can see the difference in speed against 2 different AP's. (Ap1 is the WRT300N and Ap2 is the SRX200).
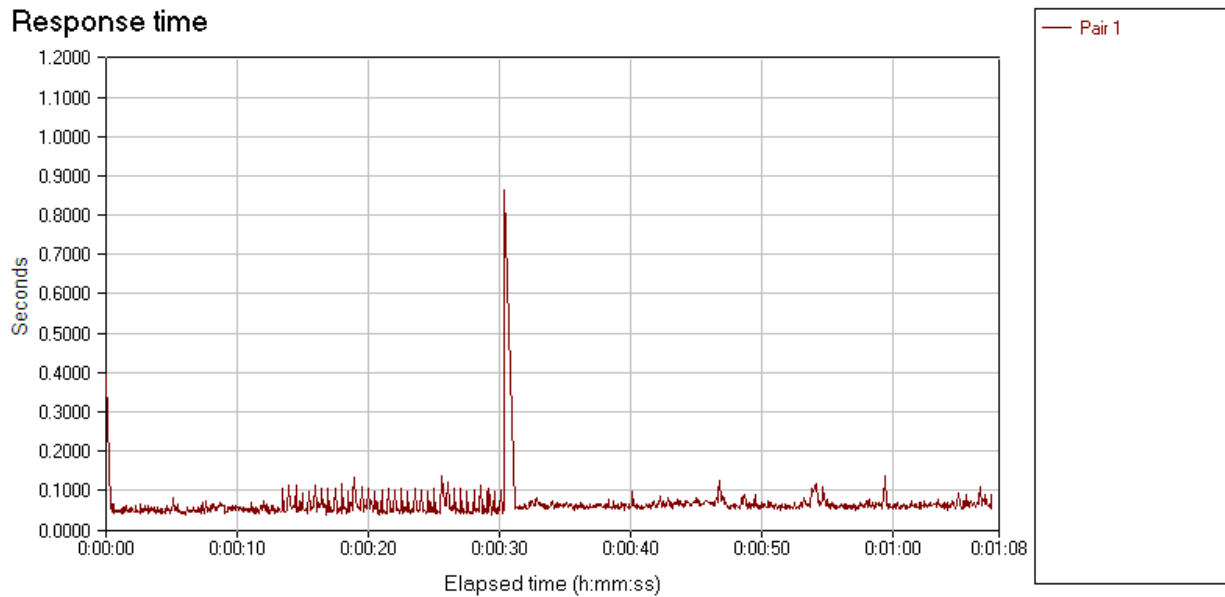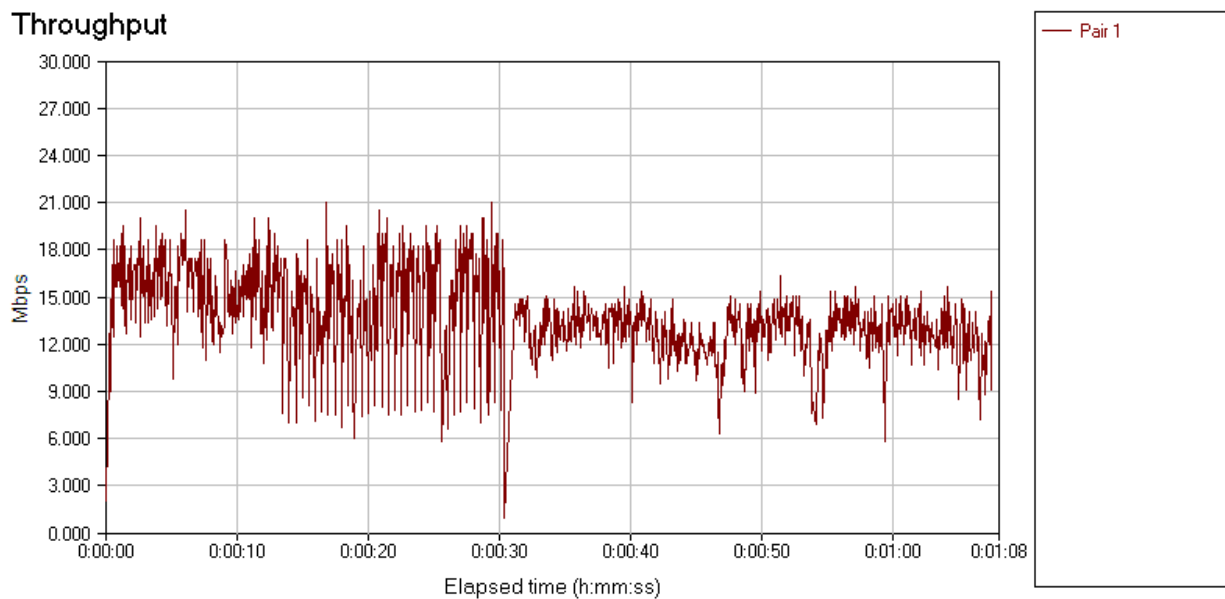
Figure 5

Figure 6

Conclusions

This round of tests shows the capability of the SRX driver set in regards to Mobility. Handoff time to AP's depends on a few factors, the major one being bandwidth load over the link. Under normal circumstances: i.e. normal internet surfing, VoiP, and streaming audio/video, the SRX driver performs remarkably well without any AP assisted roaming (i.e. Cisco).