

Performance Evaluation of Wireless PC cards

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DESIGN

- used **shell script**, which
 - took an IP address of the server as a parameter,
 - ftped to the IP address,
 - started a download of the file named TEST.doc

The file **get.ftp** contains three lines that have to be typed after you login to the server,

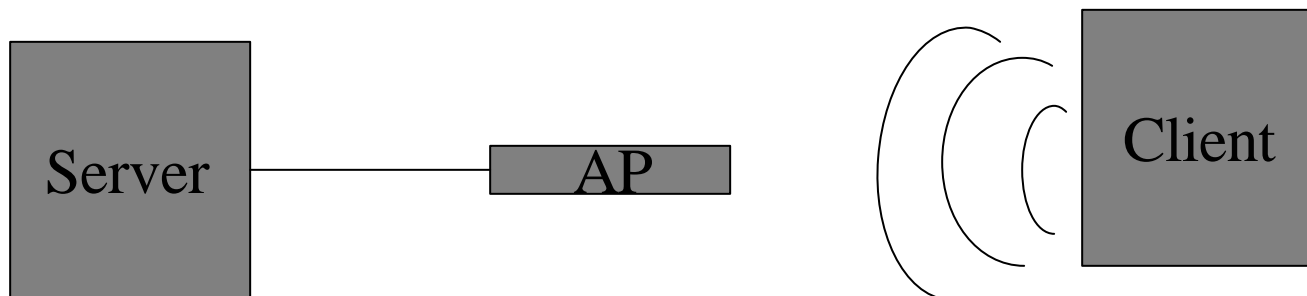
- 'bin'
- 'get TEST.doc'
- 'quit'

ftpandget.bat

```
if "%1x"=="x" goto usage
del get.tmp
echo luba >> get.tmp
echo funnygirl >> get.tmp
echo cd /Project/ >> get.tmp
type get.ftp >> get.tmp
ftp -s:get.tmp %1
```

```
goto exit
:usage
echo "Usage: ftpandget server_ip_address "
:exit
```

SETUP

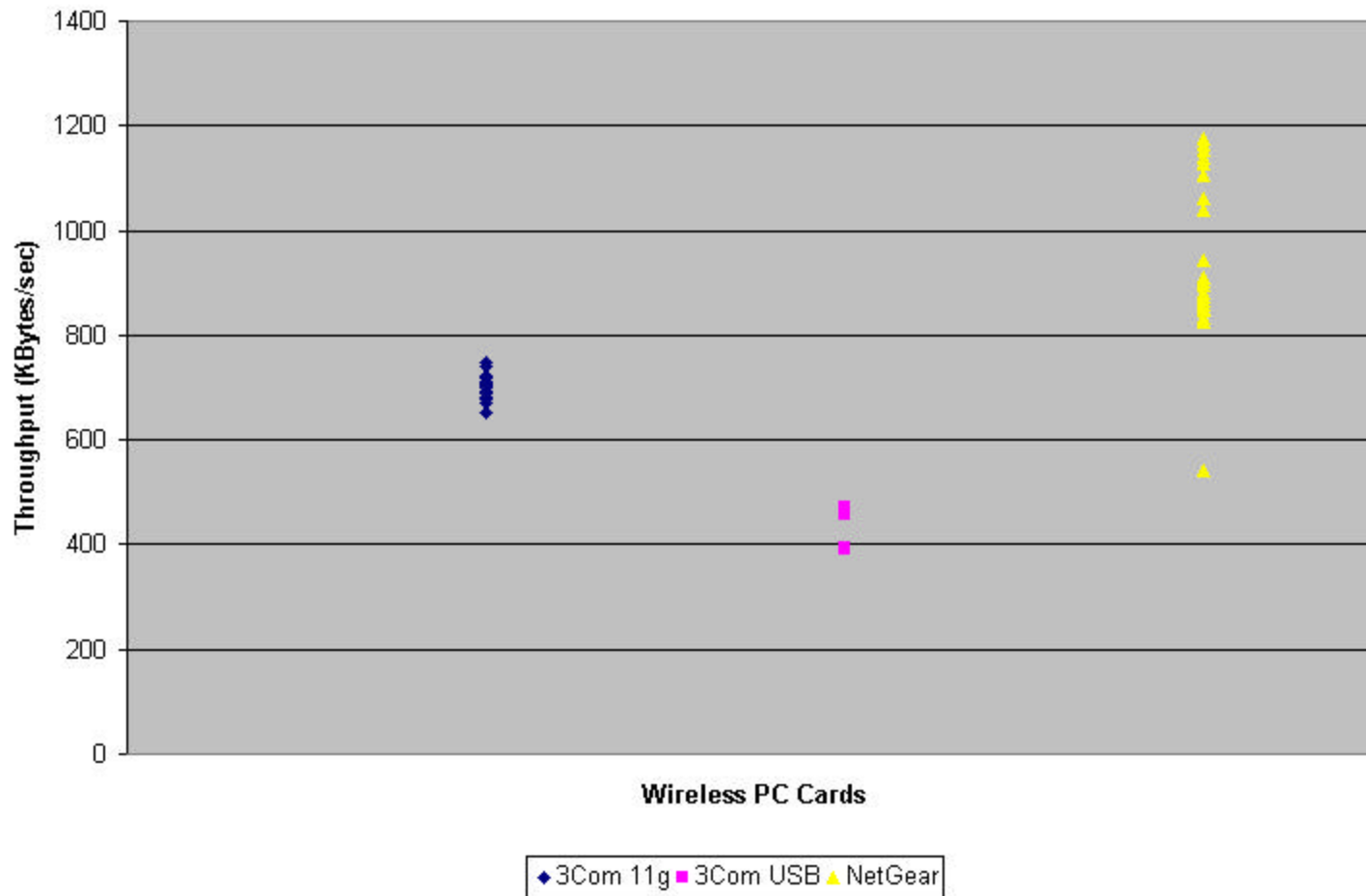


Analysis

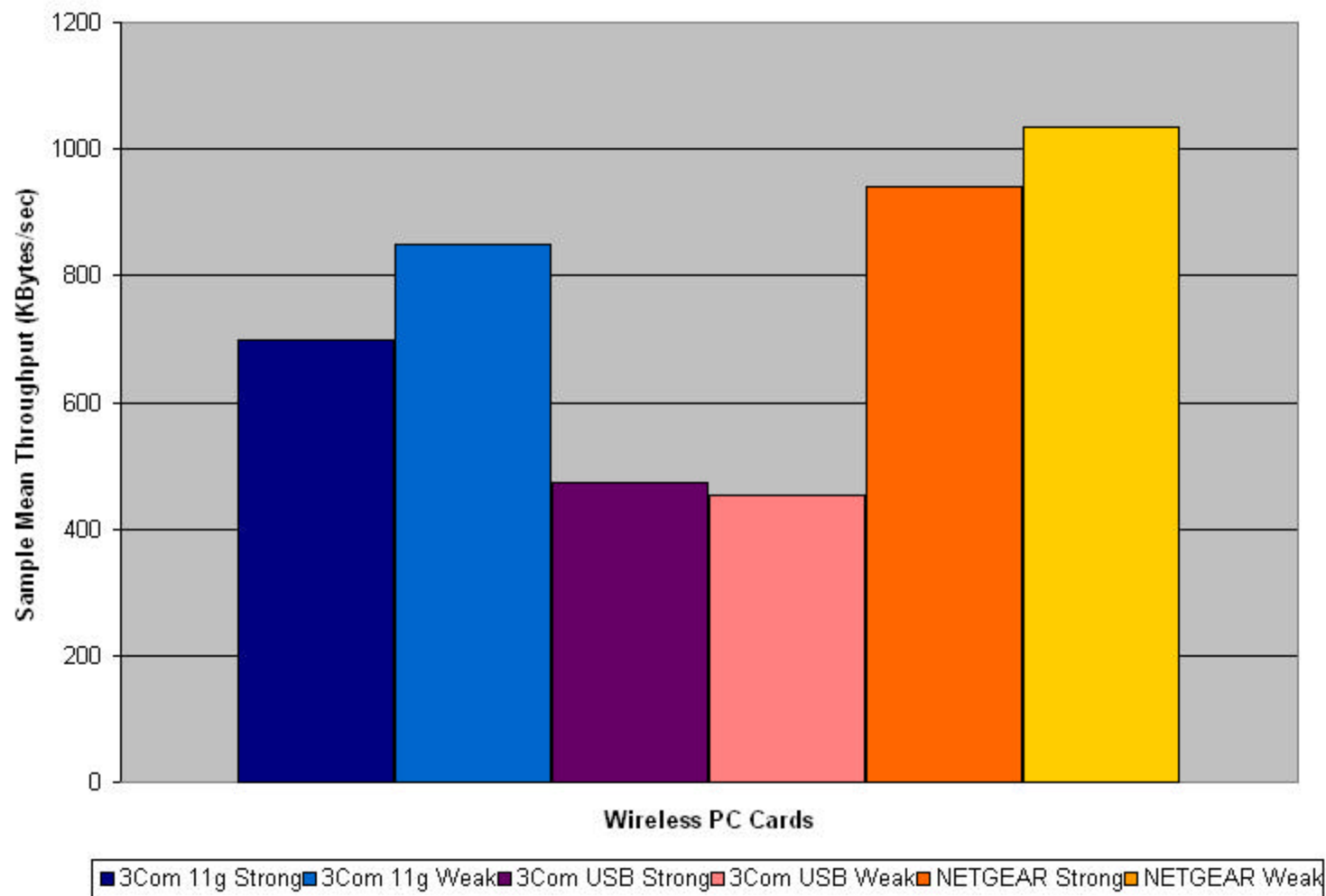
	A	B	C	D	E	F	G	H	I
2	1.52	10	712.0842	2.33	20	464.5356	0.94	30	1151.455
3	1.54	10	702.8364	2.35	20	460.5821	0.98	30	1104.457
4	1.53	10	707.4301	2.35	20	460.5821	0.95	30	1139.335
5	1.56	10	693.8256	2.36	20	458.6305	1.02	30	1061.145
6	1.54	10	702.8364	2.34	20	462.5504	0.94	30	1151.455
7	1.57	10	689.4064	2.34	20	462.5504	0.96	30	1127.467
8	1.46	10	741.3479	2.34	20	462.5504	0.94	30	1151.455
9	1.5	10	721.5787	2.74	20	395.0248	0.95	30	1139.335
10	1.55	10	698.3019	2.34	20	462.5504	1.04	30	1040.738
11	1.6	10	676.48	2.35	20	460.5821	0.93	30	1163.837
12	1.45	10	746.4607	2.34	20	462.5504	1.19	30	909.5529
13	1.46	10	741.3479	2.33	20	464.5356	1.23	30	879.974
14	1.53	10	707.4301	2.32	20	466.5379	1.23	30	879.974
15	1.6	10	676.48	2.33	20	464.5356	1.24	30	872.8774
16	1.56	10	693.8256	2.33	20	464.5356	1.31	30	826.2351
17	1.53	10	707.4301	2.33	20	464.5356	1.3	30	832.5908
18	1.61	10	672.2783	2.34	20	462.5504	1.3	30	832.5908
19	1.54	10	702.8364	2.33	20	464.5356	1.21	30	894.519
20	1.57	10	689.4064	2.34	20	462.5504	1.26	30	859.0222
21	1.59	10	680.7346	2.78	20	389.341	1.3	30	832.5908
22	1.55	10	698.3019	2.34	20	462.5504	1.26	30	859.0222
23	1.66	10	652.0289	2.35	20	460.5821	1.27	30	852.2583
24	1.61	10	672.2783	2.33	20	464.5356	1.27	30	852.2583
25	1.6	10	676.48	2.34	20	462.5504	1.31	30	826.2351
26	1.56	10	693.8256	2.32	20	466.5379	2	30	541.184
27	1.52	10	712.0842	2.34	20	462.5504	1.2	30	901.9733
28	1.61	10	672.2783	2.33	20	464.5356	1.26	30	859.0222
29	1.57	10	689.4064	2.33	20	464.5356	1.3	30	832.5908
30	1.61	10	672.2783	2.34	20	462.5504	1.28	30	845.6
31	1.51	10	716.8	2.36	20	458.6305	1.23	30	879.974
32	1.5	10	721.5787	2.35	20	460.5821	1.25	30	865.8944
33	1.55156	10	698.2667	2.44129	20	473.1948	1.180313	30	941.9721

Analysis

The Performance of Three Wireless PC cards under a 100% signal strength (32 samples)



The Performance of Three Wireless PC cards under a 100% signal strength (right next to the AP) vs. Weaker signal strength (50 feet away)



Conclusion

Three wireless PC Cards were evaluated:

- **3Com OfficeConnect Wireless 11g PC Card**
- **3Com USB Carver 11g PC Card,**
- **NetGear WG511 Wireless 802 11g PC Card.**

Under 100% signal strength

- NetGear was 52% (more than twice) faster than the USB card.
- The NetGear was 37% faster than the 3Com OfficeConnect card,
- 3Com OfficeConnect card was 24% faster than the 3Com USB card.

Conclusion

- Suggestion to 3com would be to look into each component of their wireless cards and see where an improvement could be made.
- I am sure it is easier to say than to do, but knowing the problem is half way to solving it!