

Memory Hierarchy (Speed of access)

(Measured in 2011 at <https://gist.github.com/hellerbarde/2843375>)

	Time x1 billion
L1 cache reference	0.5 seconds
Branch mispredict	5 seconds
L2 cache reference	7 seconds
Mutex lock/unlock	25 seconds
Main memory reference	100 seconds
Compress 1K bytes	50 minutes
Send 2K bytes over 1 Gbps network	5.5 hours
SSD random read	1.7 days
Read 1 MB sequentially from memory	2.9 days
Read 1 MB sequentially from SSD	11.6 days
Disk seek	16.5 weeks
Read 1 MB sequentially from disk	7.8 months
Above two together	1 year
Send packet CA->Netherlands->CA	4.8 years