Novel features in WWW
Web exhibits extreme variability
in workload characteristics.
Web traffic exhibits a burst behavior.

See example about www

Web Server
Perf issues: load spikes, high variability of doc sizes
HTTP: stateless protocol, defines interaction
TCP: connection setup overhead

HTTP requests-response steps
Map the server to an IP address, establish the tcp/ip connection,
transmit the request, receive response, close tcp/ip connection

Delays
Browser, Network, server, user response time

Rcache << Rnetwork+Rserver

P_C : fraction of time to find data in local
Rcache : response time when data are found
$R = p_C * Rcache + (1-p_C) * Rr$

Web Proxy Architecture
Acts as an agent, represent the server
Accepts request from clients and forwards to WS
Can be configured to cache relayed responses

See example on proxy & cache

XII_Web and intranet perf issues

Bottlenecks
The components that limit system perf are called bottlenecks
Improvements on the pc can help to solve it

See example on slides

Perception of performance
WWW user: fast response, no conn refused
Web administrators: high throughput, availability

WWW Performance metrics
Conn/sec, m its/sec, response time, errors/sec;
web sites activity indicators: visit, hit;
Web advertising measurements: exposure metrics,
interactivity metrics

See example of Performance Metrics