



Benchmarking Certification Project
for Data Services
for Cosmote

Summary Report

Dated: 20th December 2011

1 Scope

Commsquare has conducted for Cosmote a “Benchmarking Certification Project for Data Services” between 16/09/2011 and 17/12/2011.

The goal was to benchmark Mobile Data Performance of the 3 Greek Mobile Network Operators as experienced by the subscribers.

2 Measurement Setup

- **Equipment:** measurements were performed “in-car” with Swissqual Diversity platform, using a Huawei K4605 USB Data-stick (42 Mbps Download/5.7 Mbps Upload).
- **Services tested:** FTP File Upload & Download, HTTP File Upload & Download, Web Browsing
- **Methodology:** ETSI TR 102 678 standard was followed.

3 Locations

- **Static:** 289 Hotspot Locations tested in all Geographical Departments of Greece
- **Drive tests:** 34 Routes throughout mainland Greece, including Motorways, Major Roads and City Routes

The hotspots and routes were selected and appointed by Cosmote.

4 Summary Report - Static tests

Results are presented below for all tested services aggregated over the total of 289 Hotspots.

4.1 Download Performance

Cosmote Mean Download Throughput is 178% above the 2nd best Competitor:

Operator	No of Samples	Mean Downlink Throughput	
		Performance [kbps]	Cosmote vs Competition
Cosmote	6478	7520	
Competitor 1	6426	2710	+178%
Competitor 2	6233	1354	+455%

NOTE: results obtained with file download tests over both FTP & HTTP protocols.

4.2 Upload Performance

Cosmote Mean Upload Throughput is 47% above the 2nd best Competitor:

Operator	No of Samples	Mean Uplink Throughput	
		Performance [kbps]	Cosmote vs Competition
Cosmote	2043	1784	
Competitor 1	1996	1215	+47%
Competitor 2	1980	367	+386%

NOTE: results obtained with file upload tests over both FTP & HTTP protocols.

4.3 Web Browsing Performance

Cosmote Mean Browsing Throughput is 31% above the 2nd best Competitor:

Operator	No of Samples	Mean Browsing Throughput	
		Performance [kbps]	Cosmote vs Competition
Cosmote	3339	1185	
Competitor 1	3250	902	+31%
Competitor 2	3232	707	+68%

NOTE: results obtained with web page load of ETSI reference pages Copernicus, Kepler & www.in.gr

5 Summary Report - Drive tests

Results are presented below for all tested services aggregated over the total of 34 Routes.

5.1 Download Performance

Cosmote Mean Download Throughput is 112% above the 2nd best Competitor:

Operator	No of Samples	Mean Downlink Throughput	
		Performance [kbps]	Cosmote vs Competition
Cosmote	1195	4034	
Competitor 1	1153	1904	+112%
Competitor 2	1112	903	+347%

NOTE: results obtained with file download tests over both FTP & HTTP protocols.

5.2 Upload Performance

Cosmote Mean Upload Throughput is 12% above the 2nd best Competitor:

Operator	No of Samples	Mean Uplink Throughput	
		Performance [kbps]	Cosmote vs Competition
Cosmote	380	973	
Competitor 1	361	872	+12%
Competitor 2	356	249	+290%

NOTE: results obtained with file upload tests over both FTP & HTTP protocols.

5.3 Web Browsing Performance

Cosmote Mean Browsing Throughput is 13% above the 2nd best Competitor:

Operator	No of Samples	Mean Browsing Throughput	
		Performance [kbps]	Cosmote vs Competition
Cosmote	586	865	
Competitor 1	578	766	+13%
Competitor 2	546	650	+33%

NOTE: results obtained with web page load of ETSI reference pages Copernicus, Kepler & www.in.gr

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Certified By:



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