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## IPAD APPS WITH TV BROADCAST BENCHMARKING: QUALITY OF EXPERIENCE STATE OF THE ART IN FRANCE

What Is The **Best** iPad App' to watch live TV or on-demand content at home or during holidays?

- The most reliable,
- The most responsive,
- The one that provides the best audio-video quality.

In one word, **the one which provides the best Quality of Experience (QoE) to consumers!**

**WITBE** is the market leader in [multi-screens video QoE test and monitoring post-customer device](#) (STB, smartphone, tablet, home gateway, connected TV).

Thanks to its unique technology, Witbe benchmarked *French broadcasters iPad Apps providing free-of-charge live content broadcasting*:

- [TF1](#)
- [France Televisions](#)
- [i>Télé](#)
- [France 24](#)
- [M6](#)
- [BFMTV](#)
- [NRJ](#)



### APPS' RANKING (FROM JUNE 29TH TO JULY 8TH, 2011)

Ranking	App'	Global Index (/100)	Availability (%)	App' launch time (s)	Video Quality (MOS, 1 -> 5)
1	NRJ	72	96.0	8.9	2.9
2	i>Tele	66	92.3	7.6	3.0
3	France24	65	95.1	8.0	2.5
4	FranceTelevisions	61	94.7	16.4	2.7
5	M6	57	94.9	18.2	2.5
6	TF1	53	88.5	8.4	2.8
7	BFMTV	51	91.4	13.3	2.4
	<i>Average</i>	<i>61</i>	<i>93.3</i>	<i>11.5</i>	<i>2.7</i>

### POST-IPAD AUTOMATED QOE TESTING METHODOLOGY

This study was conducted using one [Witbe Video QoE Robot](#) connected to an iPad (with Apple USB/HDMI cable) using a **Wifi broadband connection**.

**Robot interacts with Apps** through iPad according to predefined user scenarios.

Every 20 minutes between 7am and 11pm, it executed the following scenario on each App':

- Click on App' icon
- App' launch validation by recognizing UIs
- Browse to Live TV when necessary (TF1, France Televisions, M6 and NRJ)
- Wait while buffering
- Click on full-screen mode icon and validate it
- Watch video during 30 seconds
- Close App'

During each test, the Robot measures the **service actually delivered ... as a real user would do: according to what it SEES and HEARS** and following the **3 Quality of Experience main pillars**:

- **Service Availability:**
  - App' can be launched in a maximum of 25 seconds
  - Content buffering does not exceed 30 seconds
  - Audio-Video stream availability when reading it during 30 seconds: sound presence, no black screen, no error message, no frozen image
  - App' robustness: App' does not crash
- **App' responsiveness** and especially the time for its initialization after the click on the its icon
- **Video Quality Post-iPad** measured with Witbe's unique perceptual algorithms that take into account visible artifacts (blockiness, jerkiness, blur) and provide a predictive Perceptual Video MOS on a 1-to-5 scale (with 1=poor and 5=perfect).

### MAIN QOE OBSERVATIONS

#### Services availability is lower than in IPTV, DTT, Cable or satellite

The average availability through iPad was 93.3% while the same TV channels availability during the same period was between 97% and 99.5% according to Witbe's post-STB public benchmarking.

#### Apps' are available but video streams are not

Most services issues are related to the video stream. For some players, the video stream availability failed to less than 90%. On the contrary, Apps' average availability was about 99,3%.

#### Responsiveness is a matter of marketing but not only

The slowest Apps are generally the ones that offer the wider range of services: multiple TV channels, on demand contents, etc). But in some cases, the assumption is not true!

#### Video Quality is much lower than in IPTV, DTT, Cable or satellite

The average VideoMOS through iPad was 2.7 while the same TV channels video quality during the same period was between 3.3 and 3.9 according to Witbe's post-STB public benchmarking.

According to the MOS-scale, we can consider VideoMOS=3 as an acceptable quality for the consumer.

### RANKING METHODOLOGY

The global index (/100) is computed as follows

- Service availability: 60%
- Video Quality (Witbe VideoMOS): 30%
- App' responsiveness: 10%

### TO FIND OUT MORE

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#### About Witbe

A software editor and operator of test and monitoring solutions, Witbe offers a comprehensive approach to the quality of all IT, internet and intranet, data-voice-video, landline and mobile services.

Its Unified Quality Management System is based on measuring the Quality of Experience (QoE) delivered to users and its correlation with Quality of Service (QoS) and business data. It provides organizations with a true quality assessment based on relevant and consolidated data that fulfills the specific requirements of all entities: Businesses, IS management, Performance Managers, Engineering, Support Services.

Witbe supports its customers, including companies, government bodies and telcos, in more than 35 countries.

[www.witbe.net](http://www.witbe.net)