



Are Italian regions website accessible?

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Abstract

Main goal of this work has been the monitoring of accessibility of Italian regions homepage, in terms of performances and contents for the disable users.

Many studies on the perception of the downloading times by final users seem to converge on two temporal thresholds that act as watershed between the satisfaction, the tolerance and frustration zone.

In this panorama our work, carried out inside of the web quality assurance observatory, has seen the monitoring, through extremely realistic browser based instruments, for one entire week (24/7) of the time necessary for complete visualization (download + parsing) of the homepages of the 20 Italian regions.

This data has been compared with the standards. We assigned different scores to it following a criterion by us elaborated.

In accordance to this analysis the web sites accessibility to disabled users has been monitored. In this case also we used a criterion in accordance to the technical regulations of the Stanca law.

From the union of these two dimensions, physical accessibility and accessibility of contents to disabled users, a single criterion for the homepages of the various Italian regions has been created.

When we talk about accessibility two main areas come in mind, one correlated to themes of performance web and the other to the strategies, guidelines, resources to make the Web accessible to people with disabilities.

Relatively to the first area, in recent years the study of the web performances and in particular on the downloading times for web pages has assumed an increasing importance in the optimization processes, above all for business-to-consumer and business-to-business websites.

It has been looked at like the waiting and visualization times for a web page influences the total experience of the customer who demands the web resource and interacts with it, involving of the fallen back ones on its satisfaction and the credibility of website.

It is, however, possible to subdivide the experiences of interaction of the customers in three main zonas:

•Zone of Satisfaction

A user is "satisfied" when he/she is not conscious of the time it is taking to load the page.

•Zone of Tolerance

The page-load time exceeds that experienced in the zone of satisfaction. In this zone the user becomes aware of the fact that the page is taking time to load;

•Zone of Frustration

This third zone is where things get ugly; the user has waited to the point where he/she is significantly frustrated.

But, Is sufficient to be efficient to become an accessible web site?

The answer is negative, above all if we consider the other face of medal, the accessibility of contents for people with disabilities, a fundamental component for public website above all after the Stanca law emanation and the publication of the technical regulations that are applied to the web sites of the public administrations.

Our Work

For our performance tests on the homepage of 20 Italian regions we used Evalid test engine, a 100% browser based solution software. Evalid playbacks reflect very realistic "last mile" timing and performance data if the eValid client is run on the same kind of web connect as that of a typical user, e.g. DSL.

Metrica for physical accessibility index:

- 4 = total satisfaction range (0-4 sec.)
- 3 = satisfaction range (4-12 sec.)
- 2 = tolerance range (12-30 sec.)
- 1 = frustration range (more than 30 sec.)

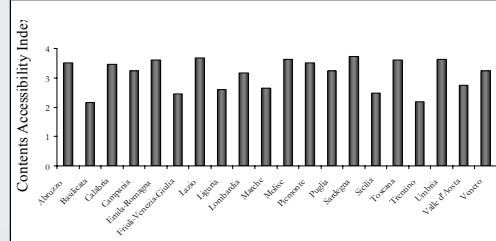
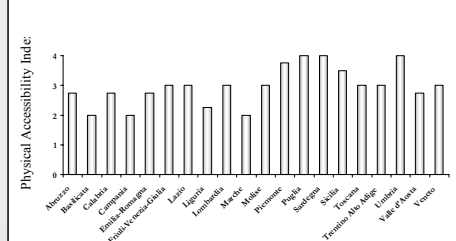
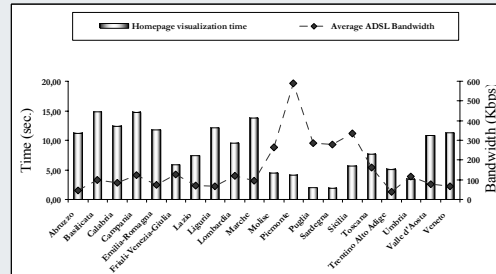
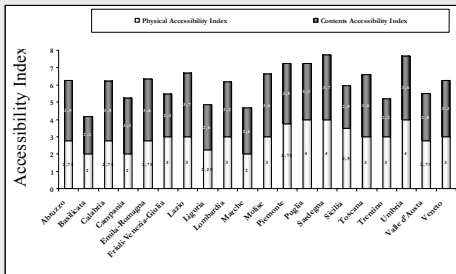
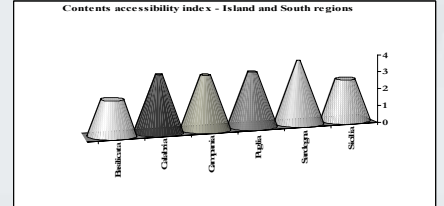
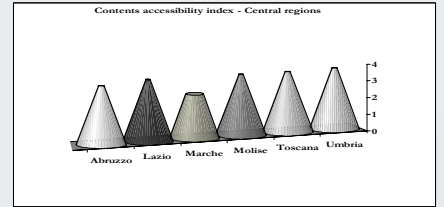
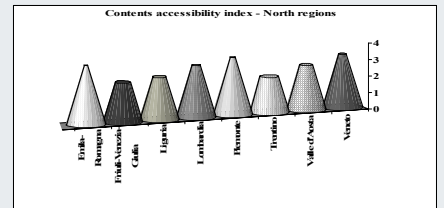
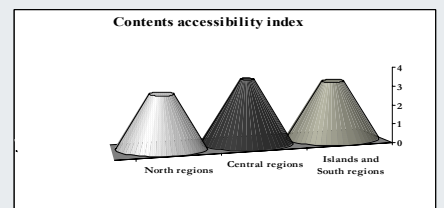
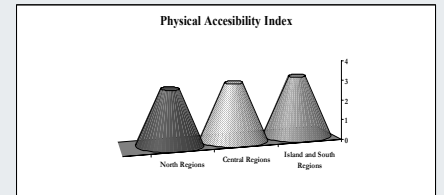
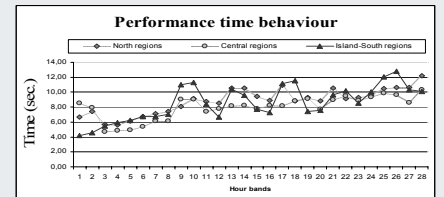
Metrica for contents accessibility index:

- 4 = total correspondence to Stanca law requirements
- 3 = good correspondence
- 2 = sufficient correspondence
- 1 = insufficient correspondence
- 0 = element not available

In some cases we used a particular metrica that it excludes the intermediate points:

- 4 = total correspondence
- 1 = insufficient correspondence or not correspondence

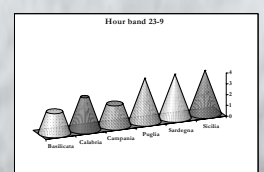
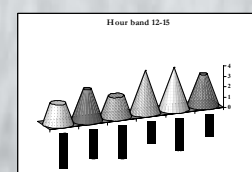
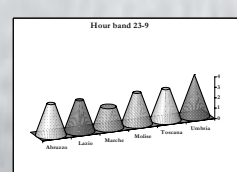
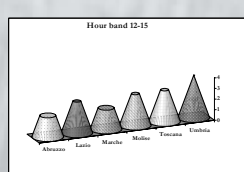
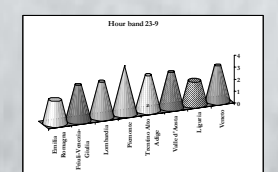
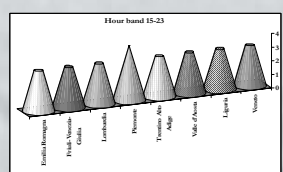
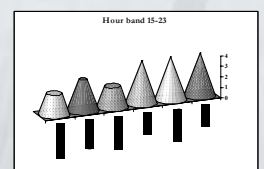
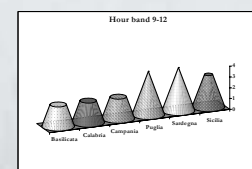
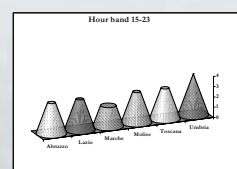
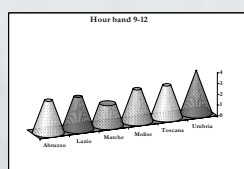
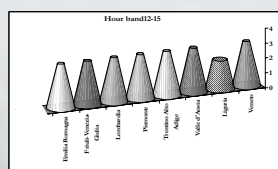
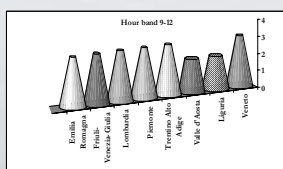
We realized for one week (24/24 -7/7) a web performance monitoring on the 20 homepage of Italian regions, public websites. During the monitoring subdivided on four asymmetric hour bands (9-12, 12-15, 15-23, 23-9) we made ten samplings for single hour band for a total of 40 samplings for day and for site. Every day, therefore, we realized 800 samplings, and in a week 5.600 ones with ADSL connection.



Physical accessibility index – North Regions

Physical accessibility index – Central Regions

Physical accessibility index – Islands and South Regions



Conclusions

Results obtained in this study show that Accessibility Index (AI), subdivided in his two dimensions, is a suitable parameter to have macro informations on performance and contents accessibility to people with disabilities. Nevertheless the contents accessibility index (cai) is a direct function of the property of regions website, or website in general while the physical accessibility index (phai) depends on property not only correlated to website but to webserver/client provider bandwidth, traffic on the site, number and type of web page requested. For this motive in the future we will realize other performance samplings with different ADSL Provider and from different geographical locations.