infoaccesibilidad

observatorio disc@pnet

Accessibility of **Travel and Transportation** Websites

Synthetic version

disc@pnet

Fundación ONCE

FEDER

Realizado por:

Technosite

Accessibility of Travel and Transportation Websites

The ability to access business information and perform transactions online has become a reality known as e-business. Its increased use in recent years reveals the emergence of a new relationship between businesses and end-users of certain kinds of services. Chief among them, and most favored by web users, are the many travel- and transportation-related services available online.

This study from Discapnet's Infoaccessibility Observatory examines the current situation of websites providing online travel and transportation services. A sample of 15 different websites was chosen and analyzed for accessibility by applying the same design the Observatory has developed and used on its previous studies.

We can report that the scores obtained are disappointing in regard to their compliance with the technical criteria for accessibility, and highly unsatisfactory as indicated from the user feedback surveys.

None of the 15 websites under study attained an acceptable percentage of success at applying the technical criteria for accessibility. Indeed, the best of them, the Mass Transit Consortium of Madrid, only scored a 37.50% success. And only one other website, that of the Spanish national railway RENFE, reached 25% on successfully employing the technical criteria. The remaining 13 sites scored even lower than that, including one at 0% from the Turespaña website.

As on other prior studies, the user feedback survey percentages outscored the technical evaluation on every website. The Madrid Mass Transit Consortium once again topped the list at 72.22%.

For the public sector, there is a legal obligation already in effect (since January 1, 2006) to meet web accessibility standards, and that obligation will later apply to the private sector as well. The time has come, then, not only for people to become aware of the barriers some users face on the web, but also for direct action to be taken to remove such undesirable and unnecessary obstacles. The best way remains: better understanding of the technical criteria and suitable training for those who design, develop, and maintain the contents of these websites.

NB: For more information, a detailed version of the present study (in Spanish) can be found on the Observatory website at:

http://www.discapnet.es/Discapnet/Castellano/Observatorio_infoaccesibilidad/default.htm

1. Introduction

New technology for information and communication is providing more and better ways for customers to interact with suppliers of goods and services. Consumers can now go online without leaving the workplace or home or waiting in lines. E-business emerged in the second half of the 1990s and has been gaining market share progressively, according to recent studies.

This new way to purchase goods and services is potentially a benefit for those who have trouble moving, orienting, or relating in the physical brick-and-mortar world. The possibilities offered by not having to go outdoors, by receiving undivided attention during the transaction, and by using individualized technical aids available at home or work represent a great step forward in accessibility, for certain user groups, as more businesses go online.

Recent studies show that the most highly demanded online service in Spain is for purchasing transportation tickets. This fact led us to wonder about the situation of travel and transportation-related websites in terms of their accessibility.

Aside from (though without losing sight of) the legal obligation applying to transportation run by public administrations (mandated to make all their web-based services accessible as of January 1, 2006 as set forth in the fifth additional disposition of the Law of Information Society Services and E-Business), the purpose of the study on which this report is based is to outline the current situation of a sample of websites related to travel and transportation. Under study were 15 websites chosen following criteria of sector (land, air, and sea). The sample includes a few travel agencies offering their services online, as well as the main general information website on Tourism in Spain run by the General State Administration. The objective is to show the strengths and weaknesses present in the design and development of the corporate websites, and to attempt to point out what measures and adjustments their webmasters must take to meet the technical standards on web accessibility and comply with the current law.

The results obtained on this study sketch out what should act as a starting point to reflect on the current situation and to being adopting measures to improve online services. That is the spirit underpinning this study, which attempts to stimulate the achievements made and give impetus to steps that can make the web open to all users regardless of their functional limitations or the limits of their devices.

2. The Information Accessibility Observatory at Discapnet

In 2004, the Discapnet Project, co-financed by the ONCE Foundation of Spain and the European Regional Development Fund (ERDF), started up the Info-accessibility Observatory to generate and publicize information on website accessibility, by both analyzing specific sectors as well as comparing across sectors to monitor their development over time. The reports on the accessibility of university websites and the general State Administration's e-services are a result of that line of work.

The purpose of the reports by the Discapnet Info-accessibility Observatory is to inform on and highlight not only the degree of compliance with current norms, but also the good features and main obstacles on the websites, including assessments from user feedback. It is hoped that a deeper understanding of the strengths and weaknesses

identified by web experts and users alike will lead to a better understanding in webmasters and web designers of what constitutes web accessibility, what tools and services are available. Greater interaction, then, will lead to improving the ever-increasing usefulness of such sites.

The Observatory employs an innovative methodology designed by Technosite. The methodology follows on the W3C/WAI guidelines for combining the technical analysis of accessibility with an assessment of the usability and accessibility based on feedback from the users' own experiences.

Evaluation of the technical aspects takes the Web Content Accessibility Guidelines 1.0 from the W3C/WAI web as a framework and synthesizes them in a set of indicators applied to a sample of web pages by website. Verification is carried out by professionals running automatic and manual checks.

Assessment is done by a panel of users of varying functional abilities who undertake a set of tasks and then answer a questionnaire on their perception of each site. This procedure helps identify both the barriers and the aids in using each site, check the "information architecture" (i.e., how the content is organized, how to navigate around the site, perform searches, etc.) as well as determine how individual users interact with the websites.

The combination of both approaches provides information that is relevant, systematic, and qualified regarding accessibility in the sectors subject to this study. With it, insight is gained into how to correct and improve the Internet medium.

3. Selection of the Sample

As mentioned above, the sample of this study centered on 15 websites, all of which involved transportation, whether by land (roads and railways), air, or sea, as well as travel agencies and tourism information websites. Care was taken to choose both publicly run websites as well as privately owned sites. The websites chosen for analysis were as follows:

1. Turespaña on line. The official Spanish tourism website.
2. Viajar.com (travel agency)
3. Rumbo (travel agency)
4. Lastminute.com (travel agency)
5. Iberia Airlines
6. Spanair Airlines
7. Air Europa Airlines
8. ALSA bus lines
9. La Sepulvedana bus lines
10. RENFE (the Spanish national railway)
11. FEVE (the Spanish narrow-gauge railway)
12. Transmediterránea (ferries)
13. Balearia (ferries)

14. Consorcio de Transportes de Madrid (Madrid Mass Transit Consortium)
15. Transportes Metropolitanos de Barcelona (Barcelona Metropolitan Transit)

Each of the 15 websites above was analyzed by examining 5 representative pages involving the following characteristics:

1. Home page
2. Website information page
3. Site map or help page
4. Travel search engine page (on the RENFE site, the search engine was on the homepage, so the "products" page was analyzed instead)
5. Reservations or registry page

4. Aspects of Accessibility Evaluated

As on previous studies carried out by Technosite for Discapnet's Information Accessibility Observatory, the tests to verify the state of accessibility on the websites under study are divided into two parts:

1 A technical evaluation

2 A user feedback survey

4.1. Results of the Technical Evaluation of Web Accessibility

The section shows the results obtained by evaluating the technical factors of web accessibility of the 75 pages analyzed from the 15 travel and transportation-related websites in the study.

In order to evaluate the technical aspects of accessibility, twelve aspects were used which synthesize most of the Web Content Accessibility Guidelines on the W3C/WAI 1.0 website (WCAG 1.0) corresponding to levels A and AA. The experts at Technosite, who led the study, consider the WCAG criteria able to provide a synthetic view closely matching the degree of accessibility of websites and web-based services. Included most are priority 1 aspects, though in some cases those of priority 2 were also used. The points of verification, itemized further on in the section on the analysis of the results, are as follows:

1. **Validation of W3C technologies** (priorities 1 and 2 in WCAG 1.0).
2. **Frames** (priorities 1 and 2 in WCAG 1.0).
3. **Forms** (priorities 1 and 2 in WCAG 1.0).
4. **Text-only alternatives to multimedia elements** (priority 1 in WCAG 1.0).
5. **Headers** (priority 2 in WCAG 1.0).
6. **Units in Style Sheets** (priorities 1 and 2 in WCAG 1.0).
7. **Understandable links** (priority 2 in WCAG 1.0).
8. **Contrast** (priority 2 for images in WCAG 1.0).
9. **Semantic use of colors** (priority 1 in WCAG 1.0).

10. **Alignment of content in tables for layout** (priority 2 in WCAG 1.0).
11. **Data tables** (priority 1 in WCAG 1.0).
12. **Scripts** (priority 1 in WCAG 1.0).

It should be noted that the web pages analyzed in the study may often undergo changes and updates. Thus, the results gathered here solely reflect the status of the pages on the dates when the study was carried out: July 2006.

To see how the websites as a whole fared on the technical evaluation of web accessibility, Table 1 ranks each site's total score in percentages, from highest to lowest.

Table 1.
Classification of travel and transportation websites, by percent success at correctly applying the criteria analyzed on the technical evaluation of web accessibility

Websites	% Success
CT Madrid	37,50
RENFE	26,67
Air Europa	24,44
TM Barcelona	19,05
ALSA	18,75
Rumbo	18,60
La Sepulvedana	16,67
Viajar.com	15,91
Iberia	15,56
Spanair	12,77
Transmediterránea	11,36
FEVE	10,42
Balearia	10,00
Lastminute	8,16
Turespaña	0,00
Average:	**16,09**

The scores from the technical analysis of the sampled web pages on travel and transportation-related websites can not be interpreted as favorable. **The overall success rate of compliance with the accessibility standards is 16.09%.**

Individually, not one single site scored even 50% on the tests for verifying the criteria for analysis. Only one (the Madrid Transit Consortium, at 37.5%) surpassed the 33% mark, joined by only one other to surpass 25% (RENFE, at 26.67%).

A total of 13 websites did not reach a score of 25% success. The Turespaña website had a particularly alarming score: none of the pages sampled were found to comply with any of the criteria for accessibility under study at all, resulting in a success rate of 0%.

Table 2 shows the results obtained on the technical analysis for each criteria of accessibility used in the study.

Table 2.
Classification of the criteria analyzed, in percent success on the technical evaluation tests for web accessibility.

Criterion	% Success
Table alignment	83.58
Understandable links	34.29
Color contrast for images	14.67
Scripts	10.96
Text alternatives for images	7.14
Forms	2.00
Valid HTML and CSS code	1.33
Headers	1.33
Frames	0.00
Data tables	0.00
Semantic use of color	0.00
Style sheets	0.00

By far the best score attained was that of the criterion for table alignment for layout purposes (83.58%). Even though this technique is not the most desirable, its use is widespread throughout the sample: it was used on 67 of the 75 pages making up the sample. The remaining criteria failed to reach the 50% success rate. At a distant 49 percentage points below is the second best score, obtained by the criterion of understandable links (34.29% success).

Below that, none of the other criteria reached a successful compliance rate of 15%. Color contrast for images scored 14.67%, the use of scripts scored 10.96%, giving text alternatives for images a 7.14%, accessible design of forms a 2%, and valid code and correct use of headers both scored 1.33%.

There were 4 criteria that scored 0% success at complying with the criteria analyzed in the study: the use of frames, the accessible design of data tables, the semantic use of color, and the application of style sheets.

4.2. Results from the User Feedback Assessment

To assess the travel and transportation websites, each of the 6 users (people with visual, auditory, physical, or no impairment) received a self-administered test with instructions on how to fill it out.

The directions received by the users to assess each of the 15 websites were as follows:

1. Browse the website and find the indicated places.
2. Carry out 5 tasks for each of the services to be assessed.
3. Write down the answer to each task, as well as how long it took you to carry it out and the steps you followed to do so.
4. Make a note of any defeats—any time you gave a task up due to trouble with accessibility issues on the page.
5. Fill out a satisfaction survey of 10 multiple-choice questions (with 4 options each), and give your reasons for each answer.

The results obtained were then tabulated in order to draw measurable and comparable

conclusions in terms of percentages.

After the participating users had turned in their surveys, a user discussion group was held so that they could go over their overall impressions and find common ground regarding the accessibility and usability of the websites.

What follows below is a look at the number of successes, errors, and defeats the participating users had on the assigned tasks and for each website making up the sample.

Table 3.
Successes, errors, and defeats on the user assessment tasks, in absolutes and total percent.

Website	Success	Error	Defeat
CT Madrid	24	3	3
Viajar.com	23	4	3
Balearia	23	6	1
Lastminute.com	22	4	4
Air Europa	21	5	4
Transmediterránea	21	6	3
ALSA	19	7	4
TM Barcelona	19	4	7
Turespaña	18	9	3
Rumbo	18	7	5
Iberia	17	12	1
RENFE	15	7	8
FEVE	14	6	10
Spanair	13	14	3
La Sepulvedana	13	1	16
Total:	**280**	**95**	**75**
%	**62.22**	**21.11**	**16.67**

Table 3 displays the results obtained from the 6 users for the 5 tasks they were to perform on the 15 websites.

Of the 450 total tasks carried out by the 6 users on the 15 websites in the sample, 280 were completed successfully (62.22%), and 95 were completed erroneously (21.11%). The number of defeats due to accessibility or usability problems with the online services was 75 (16.67%).

Based on the data gathered in Table 3, the following information can be considered the most relevant:

1. The percentage of successes is the lowest of all the studies conducted by this Observatory to date. Similarly, the percentage of errors made by the users when completing the tasks is the highest of any Observatory study so far.
2. The website scoring the highest in terms of successful completions of the tasks was that of the Madrid Mass Transit Consortium (CT Madrid), with 24 successes (80%). It is also the second lowest in terms of errors and defeats (3 for each section, 10% in total).
3. The La Sepulvedana Bus Lines website registered the lowest number of errors on tasks to be done: 1 error (3.33%). Yet that figure may be misleading, since it also registered the lowest number of successes (13, at 43.33%) and the

highest number of defeats (16, at 53.33%). The website was designed wholly in Flash, which made some users give up the tasks before completing them. The blind users in particular were unable to complete any task on the site.

4. The fewest number of defeats was registered at both the Iberia and Balearia websites, at 1 apiece (3.33%). However, Iberia's favorable score is marred by its also having the second poorest score on errors (12 total, 40%).

The data presented here indicate that this sector should make major improvements to their website design if they are to make their information and services available to certain segments of the population. We point out that nearly 4 out of every 10 operations made by the users did not result in the desired goal. In terms of doing business and providing public services, this figure should be quite conclusive as regards the need for reform if they are to gain clientele or provide services to people whose profiles are similar to that of the users in the study.

The following are the results obtained from the "as hoc" questionnaire each user filled out after finishing the assigned tasks for the sample of travel and transportation websites.

The results have been converted to percentage scores, and are presented in Table 4 for the 6 users as a whole who participated in the survey (bearing in mind that 5 of them had some kind of functional impairment whereas one did not).

Table 4.
Percent scores on the user satisfaction feedback survey.

Website	%
CT Madrid	72.22
Air Europa	60.00
Viajar.com	57.78
Lastminute.com	55.00
Iberia	54.44
Turespaña	53.89
TM Barcelona	53.33
Transmediterránea	52.22
Rumbo	51.11
Balearia	50.56
Spanair	49.44
ALSA	47.78
RENFE	46.11
FEVE	40.56
La Sepulvedana	24.44
Average:	**51.26**

From the data in Table 4, the main information can be drawn as follows:

1. The average satisfaction rating obtained from the feedback surveys overall is placed at 51.26%, making it one of the lowest levels found to date on any Observatory study.
2. The highest-valued website on the user satisfaction survey belongs to the Madrid Mass Transit Consortium (CT Madrid), at 72.22%. It may be recalled that this website also ranked highest on the technical analysis.
3. At a distance of some 12 percentage points below, we find the second-highest website: Air Europe, at 60%.
4. In the 50-60% range we find a total of 9 websites: Air Europe (60%), Viajar.com (57.78%), Lastminute.com (55%), Iberia (54.44%), Turespaña (53.89%), TM Barcelona (53.33%), Transmediterránea (52.22%), Rumbo (51.11%), and Balearia (50.56%). The Turespaña website score is particularly interesting to note, given that its score of successes on the technical evaluation was 0%. Two other websites, Balearia and Lastminute.com, despite their poor turnout on the technical analysis (10% and 8.16% respectively) were also given user satisfaction ratings in this range. While user feedback scores generally observe a relative relationship with the technical scores, they do not always coincide. This leads us to think that, though certain aspects of usability can aid accessibility, they are not necessarily conditioned by the technical requirements assigned to accessibility in the current standards.
5. Falling below the 50% mark are 5 other websites: Spainair (49.44%), ALSA (47.78%), RENFE (46.11%), FEVE (40.56%), and La Sepulvedana (24.44%). The latter, at a difference of more than 16 percentage points below its predecessor and the only site to score under 25%, owes its poor turnout to its design based entirely on Flash, which prevented blind users from being able to carry out the tasks assigned in the assessment.

4.3. Combined Scores

Table 5 shows the scores from each dimension of the study, thereby offering a side-by-side view of the results from the technical evaluation and from the user feedback survey.

Table 5.
Comparison of percentage scores from the two dimensions comprising the study, by degree of compliance or level of satisfaction.

Technical evaluation	
Website	%
CT Madrid	37.50
RENFE	26.67
Air Europa	24.44
TM Barcelona	19.05
ALSA	18.75
Rumbo	18.60
La Sepulvedana	16.67
Viajar.com	15.91
Iberia	15.56
Spanair	12.77
Transmediterránea	11.36
FEVE	10.42
Balearia	10.00
Lastminute	8.16
Turespaña	0.00
Average:	**16.09**

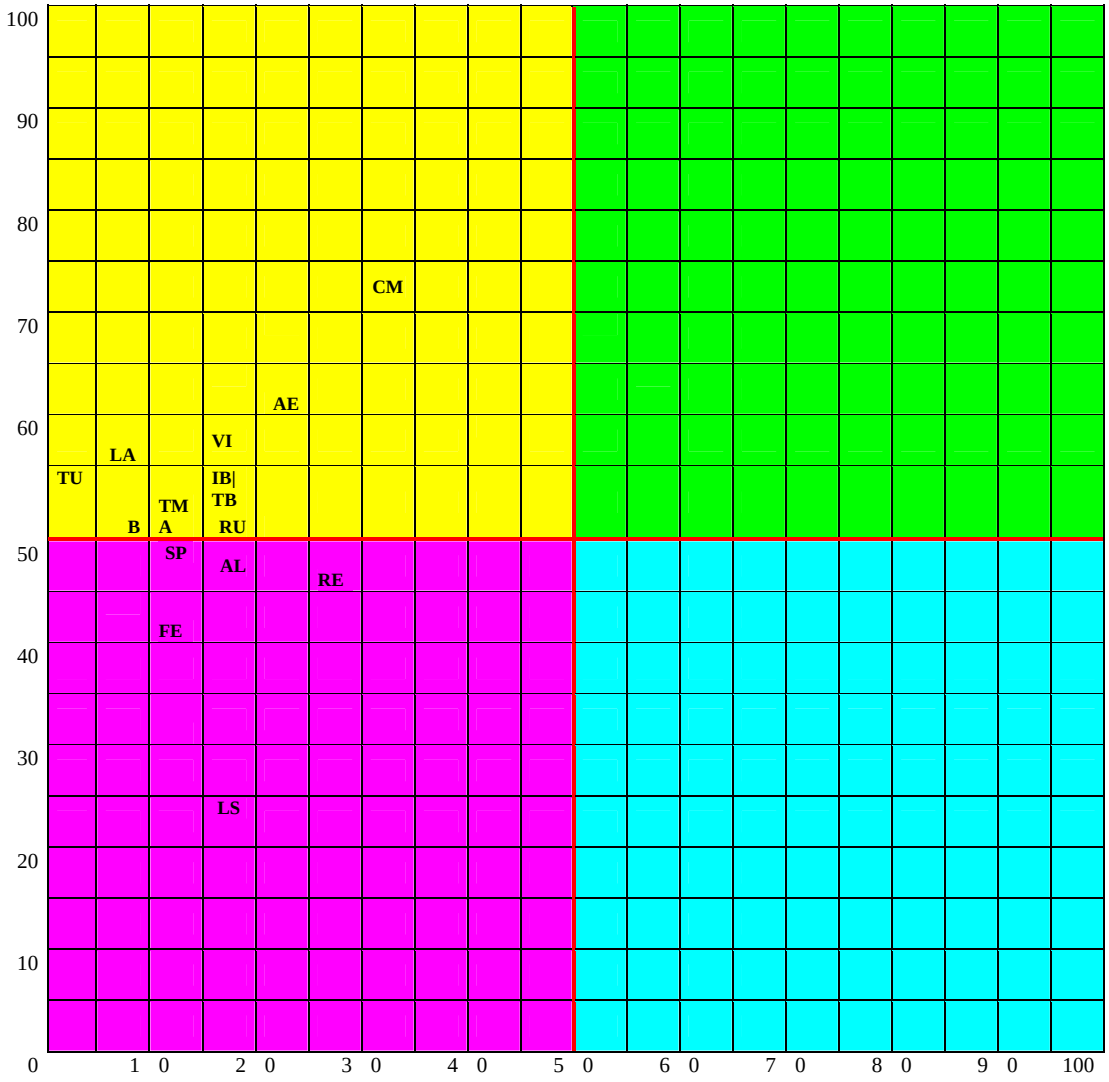
User feedback	
Website	%
CT Madrid	72.22
Air Europa	60.00
Viajar.com	57.78
Lastminute.com	55.00
Iberia	54.44
Turespaña	53.89
TM Barcelona	53.33
Transmediterránea	52.22
Rumbo	51.11
Balearia	50.56
Spanair	49.44
ALSA	47.78
RENFE	46.11
FEVE	40.56
La Sepulvedana	24.44
Average:	**51.26**

Of the comparison of information in the two tables, we highlight the following:

1. The highest-ranking website on both dimensions is the Madrid Mass Transport Consortium site (CT Madrid), though its percentage score for compliance with technical criteria is very low (37.50%).
2. The averages on both dimensions are the lowest seen on any Observatory study.
3. The difference between scores for some of the websites is notable. The Sepulvedana Bus Lines site score is ranked much higher on the technical evaluation list than its last-place position on the user feedback assessment. In contrast, the Turepaña website did not pass a single test of technical criteria and yet was given a satisfaction rating of more than 50%. In a similar but less striking vein is the Lastminute.com website.

Graph 1 displays a situation map of each website for both dimensions.

Graph 1
Combined scores from the technical analysis and the user feedback assessment in the study of travel and transportation-related websites.



Legend: This graph displays the combined scores from the technical analysis and the user feedback assessment on a quadrant table.

1 Upper left (yellow): technical analysis below 50% and user satisfaction above 50%.
2 Upper right (green): technical analysis and user satisfaction both above 50%.
3 Lower left (red): technical analysis and user satisfaction both below 50%.
4 Lower right (blue): technical analysis above 50% and user satisfaction below 50%.

The diagonal line crossing the table marks the dividing line above which fall sites scoring higher on the user feedback survey and below which are sites having higher scores on the technical evaluation.

The following list shows the abbreviations used and the percent scores obtained by each website on the technical analysis and user feedback, separated by a slash:

AE: Air Europa (24.44/60.00).
AL: ALSA (18.75/47.78).
BA: Balearia (10.00/50.56).
CM: CT Madrid (37.50/72.22).
FE: FEVE (10.42/40.56)).
IB: Iberia (15.56/54.44).
LA: Lasminute.com (8.16/55.00).
LS: La Sepulvedana (16m67/24.44).
RE: RENFE (26.67/46.11).
RU: Rumbo (18.60 /51.11).
SP: Spanair (12.77/49.44).
TB: TM Barcelona (19.05/53.33).
TM: Transmediterránea (11.36/52.22).
TU: Turespaña (0.00/53.89).
VI: Viajar.com (15.91/57.78).

To understand the content displayed in the graph, the following points should be noted:

1. The vertical axis shows the percent satisfaction from the user feedback.
2. The horizontal axis shows the percent score from the technical analysis.
3. The graph displays a four-quadrant map reflecting accessibility (technical analysis) and usability (user satisfaction).
4. The upper left quadrant shows the most usable websites according to user feedback, but not very accessible according to the results of our technical analysis. The upper right quadrant shows the most usable and accessible sites. The lower right quadrant shows the websites that are not very usable but more accessible, while the lower left quadrant shows the websites that are neither usable nor accessible..
5. The diagonal crossing the graph from bottom left to upper right, denotes the point where both assessments would be if the site were equally accessible and usable. Scores above the line (which in this case are all of them) indicate sites considered more usable (user feedback) than accessible (technical evaluation). Under the diagonal (none in this case) would be the other way around. This reveals that all the scores in our study show a higher rating from user feedback than from their compliance to the norms of accessibility (with a few cases showing a great difference, such as with the Turespaña site).
6. None of the websites appear in the upper right quadrant where the most suitable websites would be in terms of usability and accessibility.
7. The highest concentration of websites fall within the lower half of the upper left quadrant, which suggests that the websites overall (10 websites) are “discreetly usable” according to the users, but hardly very accessible according to their degree of technical compliance.
8. There are 5 websites in the lower left quadrant (ALSA, FEVE, La Sepulvedana, RENFE and Spanair) showing the worst results in terms of usability and accessibility. They fall within the upper region of the quadrant, except for La Sepulvedana, which is positioned near the midpoint of the quadrant. This suggests that its accessibility scored worse than its usability.
9. We again point out the great difference between percent scores on the two

dimensions witnessed by the Turespaña website. Its unfavorable score (0%) on compliance with technical criteria for accessibility lies far below its score on user satisfaction (53.89%). While we can offer no clear explanation for such a large gap, we may hazard that the accessibility problems may be ameliorated by the user's skill and the use of certain compensatory strategies and devices that favor usability (a strongly subjective dimension) without otherwise lessening the effects on criteria for accessibility (which are objective scores based on established standards).

4. Conclusions

These studies by the Discapnet Information Accessibility Observatory are intended to show the current state of affairs regarding accessibility on the Web. At the same time, they are also meant to provide information for improving web accessibility by better adapting online services to the needs of their users. In that spirit, this section presents the conclusions we consider most relevant. Although the conclusions that follow hold to an objective view of an unflattering reality, they are offered in the hope of providing guidelines towards bettering the sector.

1. The websites on travel and transportation show the lowest score in the history of the Info-Accessibility Observatory's studies published to date. The top-scoring site (from the Madrid Mass Transit Consortium), at 37.50%, falls far short of the top scorers in the other studies published. Except for two websites, the 13 other sites in the sample failed to reach even a 25% success. The Turespaña site pages (0%) failed to validate any of the criteria for accessibility at all. It remains clear that these websites have not incorporated applying accessibility criteria into their work routines. It is desired that the people in charge of said sites become aware of how useful it would be for certain groups of users to be able to access all the online information and services on offer. Moreover, access from their home or workplace would solve many of the hardships these people face in the brick-and-mortar world, not to mention the moral (and soon to be legal) obligation to offer Web content that is accessible to all.
2. As on earlier studies, the user assessments were more positive than the technical evaluation. On every website studied, the percent score from the feedback on the users' satisfaction with the site was higher than the score from analyzing the application of technical criteria for accessibility. In some cases, the difference between the two scores was considerable: in the case of Turespaña, the spread was almost 54 percentage points. The explanation we find resides in the wits and determination of the users who have some form of impairment. In addition to using special devices and software, these users develop strategies and skills to overcome certain barriers.
3. Only one of the twelve criteria in the technical analysis of the sample earned a score above 50%: table alignment (83.58%). The rest scored far below. Only one managed to surpass 30% success (understandable links, at 34.29%), while the rest scored under 15%. In four cases (frames, data tables, semantic use of color, and style sheets), none of the pages passed the analysis successfully.
4. We make a special point to mention the still-frequent use of frames for layout purposes and their complete disregard of the standards for accessibility (0% of

the pages using frames did so correctly).

5. We also point out the low success rate for the criterion of valid code (successful use: 1.33%), especially knowing that code can be validated automatically along with very precise recommendations as to how to solve whatever errors may arise.
6. Additionally, it is important to bear in mind that images without text alternatives (success: 7.14%) severely limit web browsing for blind people; that forms (success: 2%) should observe the criteria for accessibility so that people browsing with special devices can understand them and fill them out; and that headers (success: 1.33%), if included and correctly used, can facilitate browsing and overall comprehension of the contents.
7. We must voice our concern over the alarming score of 0% success at using cascading style sheets in adherence to the criteria of accessibility, since style sheets control how the web page is displayed to the user, and thus should be able to adjust the contents to the personal needs of each visitor.
8. Finally, the semantic use of color (success: 0%) was attempted very little, which removes the chance of helping visitors who may need visual clues to understand the contents correctly. The few times they were attempted, we may add, failed to comply with the criteria for accessibility.

5. Final Reflection

This study covers websites run by the public and private initiative. We find no relation between the degree of compliance with the criteria for accessibility and the nature of the website. The results from the technical analysis can only be called disappointing; the feedback from users, unsatisfactory. If we consider that a considerable percentage of people would benefit from the correct application of the criteria for web accessibility (by helping them overcome other barriers in the physical plane), it would be highly desirable for the people in charge of those websites to become more aware of that fact and encourage web accessibility criteria to be applied throughout their websites. This in turn would result in not only improving of the quality of their services, but also boosting their business transactions. The public sector is already subject to a legal obligation: since January 1, 2006, as set forth in the fifth additional disposition of the Law of Services in the Information Society, all public sector online services must comply with accessibility criteria. In a few years, that obligation will be extended to cover the private sector as well, as part of their social responsibility. The time has thus come not only to raise awareness of the barriers that exist for some web users (for both the disabled as well as people using modern small-screen devices such as mobile phones and PDAs), but also for the opportune measures to be taken to ameliorate them. The best solution remains clear: better knowledge of the technical criteria and suitable training for those who design, develop, and maintain these websites.