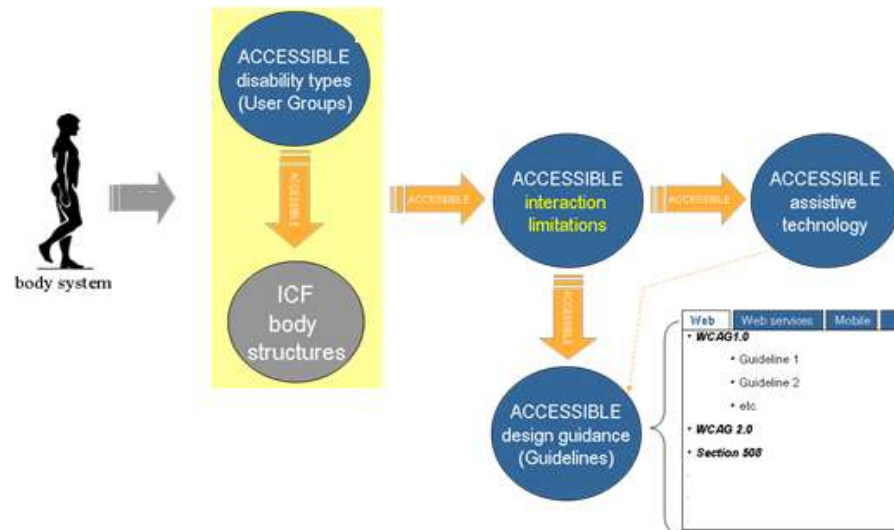


- ❑ The **Web Assessment Tool** is an integrated tool that provides to users the opportunity to evaluate the accessibility status of a web application (Web site) according to the Web Content Accessibility Guidelines (**WCAG 2.0**).
- ❑ Through the tool, designers and developers can be assisted on accessible software application development.
- ❑ The basic idea is to perform a personalized accessibility assessment process. This was achieved by the implementation of a **harmonized accessibility methodological approach (HAM)**.

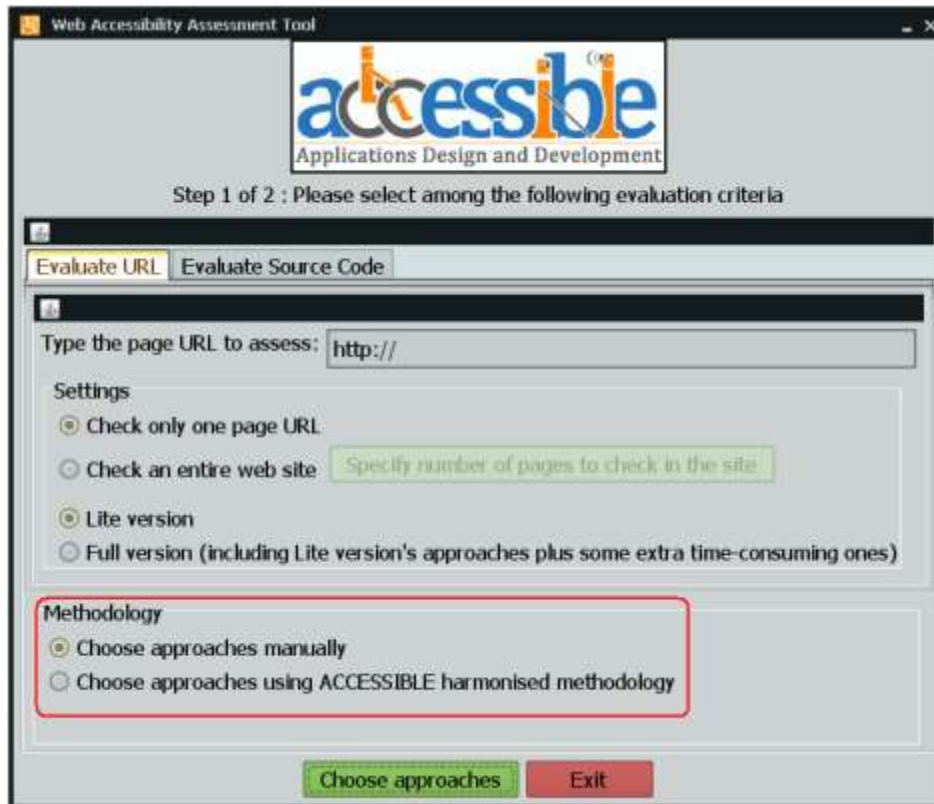
- ❑ HAM began from the **International Classification of Functioning** (Functional Limitations), **Disability** and **Health** (ICF), provided by the World Health Organization (WHO).
- ❑ In the premises of ACCESSIBLE, the **Functional Limitations** were combined with **Disabilities**, **User groups**, **Accessibility Standards** (WCAG2.0) and **Assistive Technologies** (such as Screen readers).



- As a result, all the **Disabilities** (provided by W3C) were mapped with the corresponding **Success Criteria** from WCAG2.0.

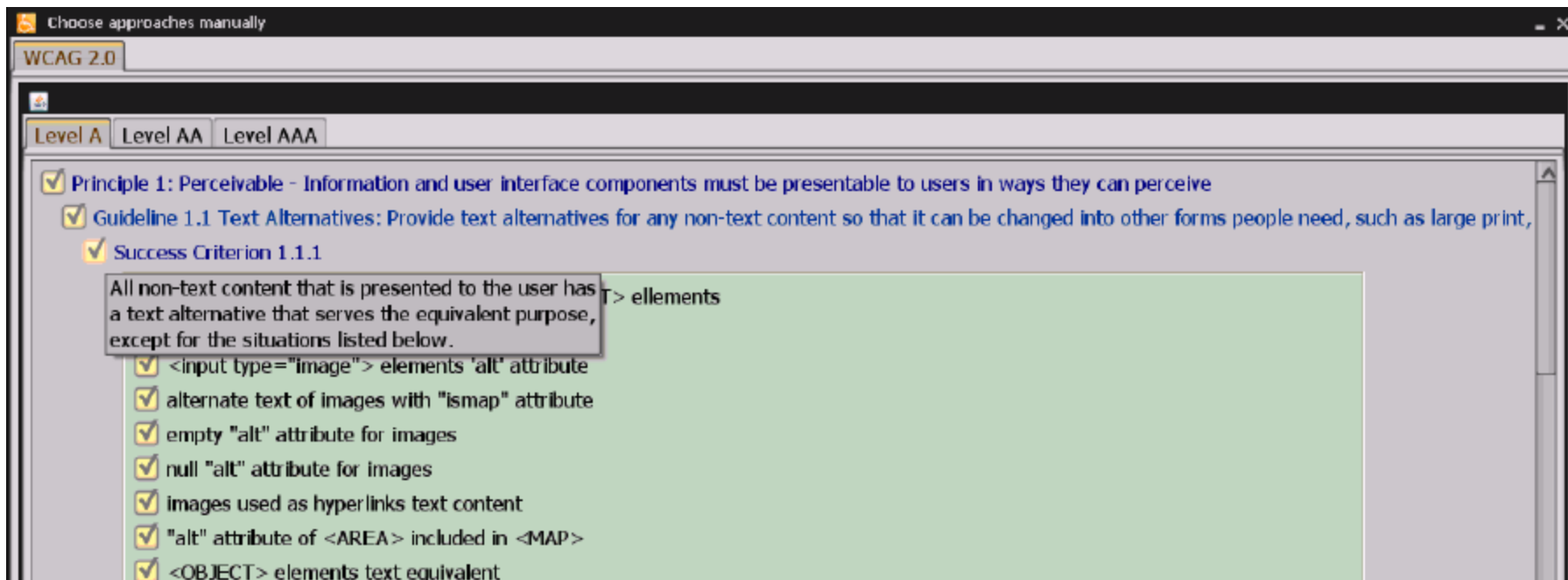
Disability Type		Short Description in terms	ICF classification	Interaction limitation		Assistive Tech.	Guideline WCAG 2.0
Main Type	Subtype			Function	Checkpoints		
Cognitive impairment	Dementia	Dementia is a non-specific illness syndrome in which affected areas of cognition may be memory, attention, language, and problem solving.	b117 Intellectual functions (incl. Retardation, dementia) b144 Memory functions b1440 Short-term memory b1441 Long-term memory b1442 Retrieval of memory b1448 Memory functions, other specified b1449 Memory functions, unspecified	May have difficulties in language, self-help, independent living etc. They acquire new knowledge at a slower pace than their peers. They have difficulties in understanding instructions. There may be difficulties in fulfilling the every-day duties or organizing one's own work load. These may be difficulty in remembering people's names, a telephone number or important address. In case there are problems in retrieving memories, there may be difficulties in a number of aspects of every day life as previously	<ul style="list-style-type: none"> o Generic links o Rich images lacking equivalent text o Video with no captions o Moving content o Generic links o Internal links are missing o Missing icons o Complex of text o Complex of site o Too many links o New windows o Text only page o Complex data table o Acronyms and abbreviations without expansions o Page with flicker or flashing content 	Scanning Software	1.1 1.1.1 1.2 1.2.1, 1.2.2, 1.2.3, 1.2.4, 1.2.5, 1.2.7, 1.2.8, 1.2.9 2.2 2.2.2, 2.4 2.4.4, 2.4.5, 2.4.9, 2.4.10 3.1 3.1.3, 3.1.4, 3.1.5 3.2 3.2.1, 3.2.5

- ❑ The **Web Assessment Tool** provides two different evaluation procedures.
 1. Assessing a Web Site using manual selection of approaches
 2. Assessing a Web Site using the HAM/Personas



The screenshot displays the 'Web Accessibility Assessment Tool' window. At the top, the 'accessible' logo is shown with the tagline 'Applications Design and Development'. Below the logo, the text reads 'Step 1 of 2 : Please select among the following evaluation criteria'. There are two tabs: 'Evaluate URL' (selected) and 'Evaluate Source Code'. A text input field contains 'http://'. Under the 'Settings' section, there are four radio button options: 'Check only one page URL' (selected), 'Check an entire web site' (with a text input field for 'Specify number of pages to check in the site'), 'Lite version' (selected), and 'Full version (including Lite version's approaches plus some extra time-consuming ones)'. The 'Methodology' section, highlighted with a red border, contains two radio button options: 'Choose approaches manually' (selected) and 'Choose approaches using ACCESSIBLE harmonised methodology'. At the bottom, there are two buttons: 'Choose approaches' (green) and 'Exit' (red).

- ❑ Steps when assessing a Web Site using manual selection
 - ❑ Choose the Web site
 - ❑ Choose between the “lite” and the “full” version (the latter includes all the approaches that are supported by the “lite” version, as well as some time consuming approaches)
 - ❑ Select the preferred Success Criteria (from WCAG2) that will be used in the evaluation process

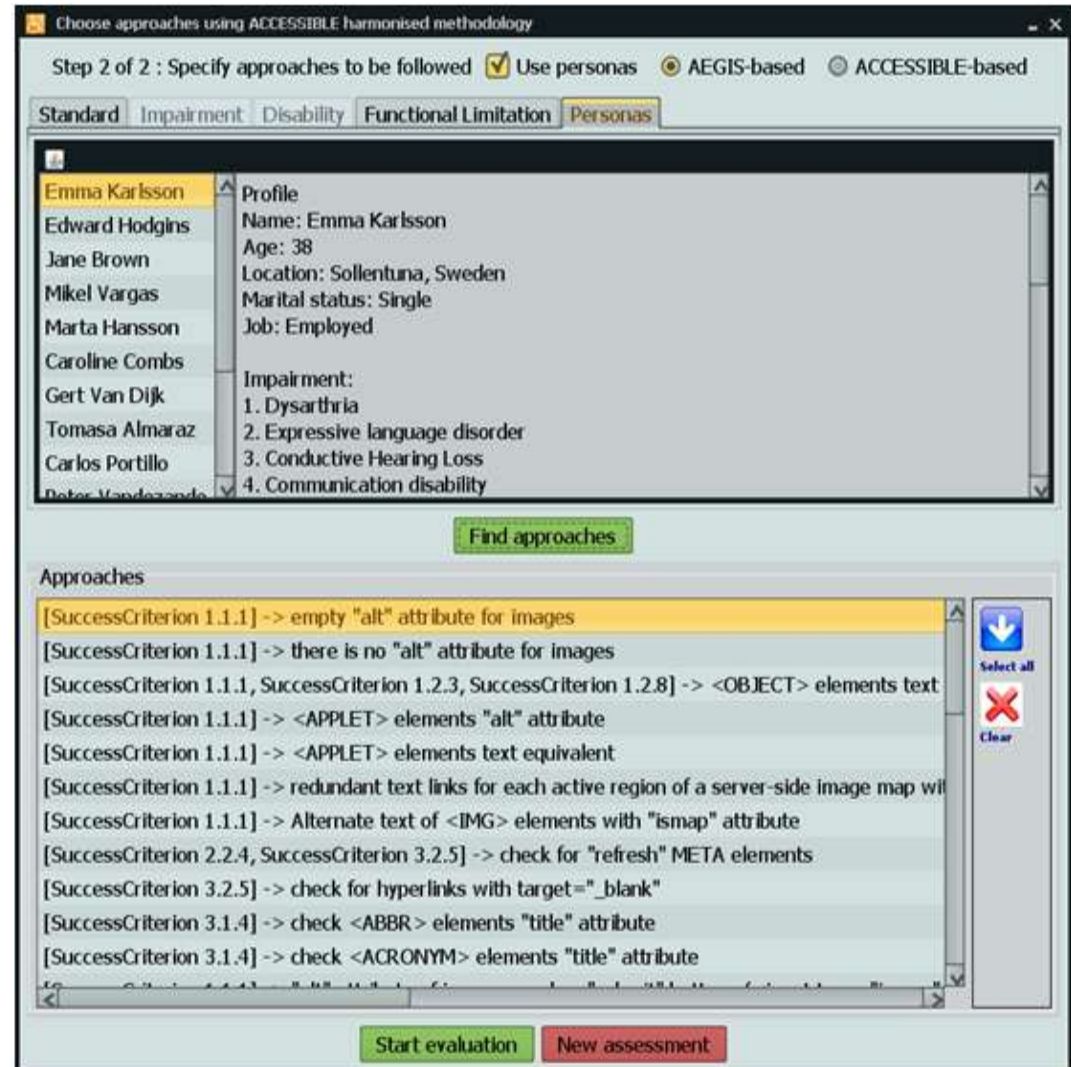


□ Steps when assessing a Web Site using the HAM

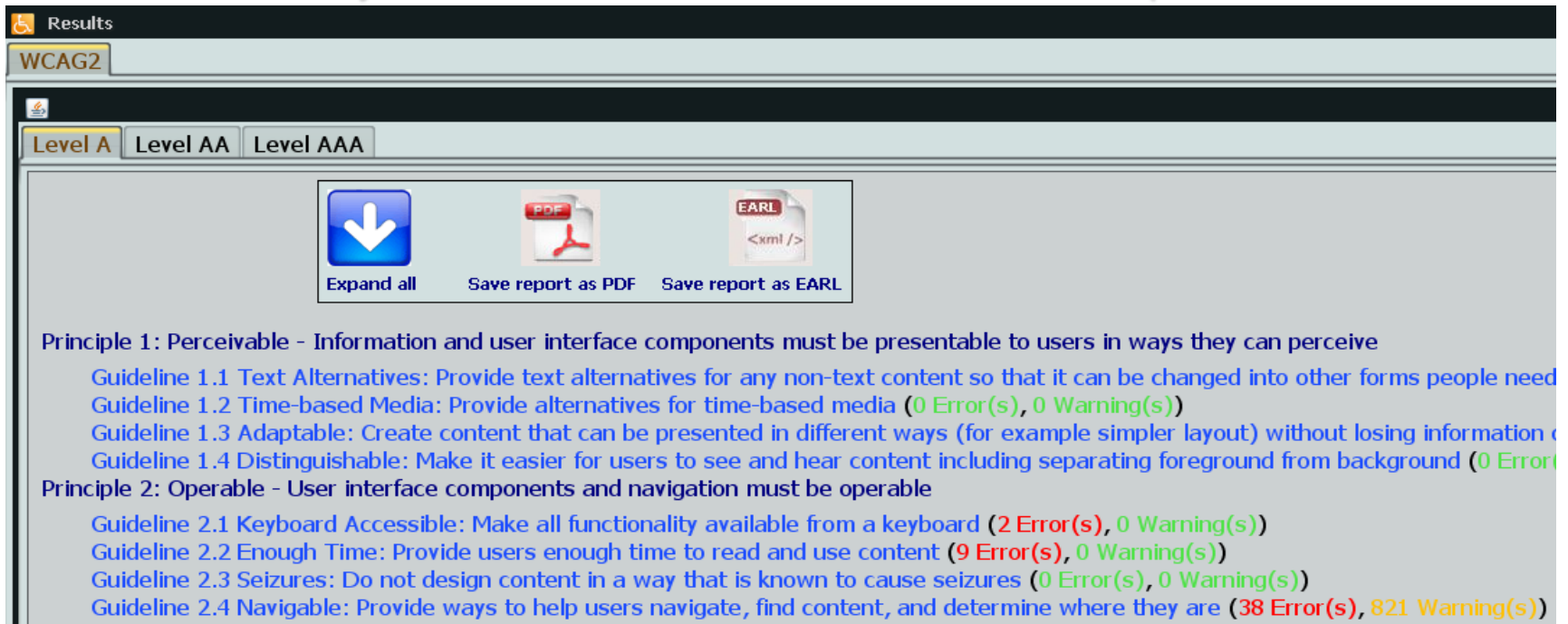
- Choose the preferred Disability and as a result the corresponding approaches that should be checked are provided to the user



- ❑ Steps when assessing a Web Site using Personas
 - ❑ Choose the preferred Persona either from the ACCESSIBLE-based or the AEGIS-based Persona (Personas are defined users with specific disabilities)
 - ❑ The corresponding approaches, concerning the selected Persona are provided to the user



- ❑ The detected errors and warnings are provided to the user along with corresponding information (such as description of the error/warning and a suggested tip in order to solve the problem)
- ❑ The accessibility score of the evaluated Web site is also provided



Results

WCAG2

Level A Level AA Level AAA

Expand all Save report as PDF Save report as EARL

Principle 1: Perceivable - Information and user interface components must be presentable to users in ways they can perceive

Guideline 1.1 Text Alternatives: Provide text alternatives for any non-text content so that it can be changed into other forms people need

Guideline 1.2 Time-based Media: Provide alternatives for time-based media (0 Error(s), 0 Warning(s))

Guideline 1.3 Adaptable: Create content that can be presented in different ways (for example simpler layout) without losing information

Guideline 1.4 Distinguishable: Make it easier for users to see and hear content including separating foreground from background (0 Error(s), 0 Warning(s))

Principle 2: Operable - User interface components and navigation must be operable

Guideline 2.1 Keyboard Accessible: Make all functionality available from a keyboard (2 Error(s), 0 Warning(s))

Guideline 2.2 Enough Time: Provide users enough time to read and use content (9 Error(s), 0 Warning(s))

Guideline 2.3 Seizures: Do not design content in a way that is known to cause seizures (0 Error(s), 0 Warning(s))

Guideline 2.4 Navigable: Provide ways to help users navigate, find content, and determine where they are (38 Error(s), 821 Warning(s))

Accessibility score of the examined page(s) : 73.89 %

100% corresponds to fully accessible
according to the conducted tests

New assessment

Accessibility score info

- The results are also available in a PDF file

Analysis of the detected errors				
Success Criterion	Technique	Error description	Tip	Problematic element
Guideline 1.1 - Level A				
1.1.1 (automatic)	G95 (Step 1) & H37 (Step 2)	Number of elements with null "alt" attribute	Provide a non-empty "alt" attribute to elements	IMG[attributes={height=695, src=graphics_new/index_v2.gif, border=0, usemap=#map, width=900}; value=[]]
1.1.1 (automatic)	G95 (Step 1) & H24 (Step 1)	Number of total <AREA> elements included in <MAP> elements without "alt" attribute	Provide a non-empty "alt" attribute to <AREA> elements included in <MAP> elements that provides a brief description of the <AREA> elements	AREA[attributes={href=/iti/el/index.html, coords=690,55,790,85, shape=rect}; value=[]]
1.1.1 (automatic)	G95 (Step 1) & H24 (Step 1)	Number of total <AREA> elements included in <MAP> elements without "alt" attribute	Provide a non-empty "alt" attribute to <AREA> elements included in <MAP> elements that provides a brief description of the <AREA> elements	AREA[attributes={href=/iti/en/index.html, coords=800,55,890,85, shape=rect}; value=[]]

- ❑ Another functionality of the **Web Assessment Tool** is the implementation of the Evaluation and Report Language (**EARL**) 1.0 Schema
 - ❑ EARL language defines a vocabulary which is used in order to describe tests results
 - ❑ EARL language facilitates the exchange of test results between Web accessibility evaluation tools
- ❑ The EARL report is provided in an xml file and also as a human-readable PDF file

□ XML Version of EARL language

```
<rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#" xmlns:acc="c:\acc.rdfs" xmlns:dc="http://purl.org/dc/elements/1.1/"
xmlns:dct="http://purl.org/dc/terms/" xmlns:earl="http://www.w3.org/ns/earl#" xmlns:rdfs="http://www.w3.org/2000/01/rdf-schema#">
<earl:TestSubject rdf:about="http://www.iti.gr">
<dct:title xml:lang="en">Informatics and Telematics Institute</dct:title>
<dct:date rdf:datatype="http://www.w3.org/2001/XMLSchema#date">Fri, 09 Jul 2010 12:56:45</dct:date>
<acc:score>54.55</acc:score>
</earl:TestSubject>
<earl:Software rdf:about="http://www.iti.gr/accessible/WCAG2.0_WebAssessmentTool.zip">
<dct:title xml:lang="en">WCAG2.0 Web Assessment Tool</dct:title>
<dct:description xml:lang="en">WCAG2.0 Web Assessment Tool is developed by CERTH/ITI within the premises of the ACCESSIBLE project</
dct:description>
</earl:Software>
<earl:Assertion rdf:about="http://www.w3.org/WAI/WCAG20/quickref/#qr-text-equiv-all#1.1.1">
<earl:result rdf:resource="#result1"/>
<earl:mode rdf:resource="http://www.w3.org/WAI/ER/EARL/rmg-strawman#automatic"/>
<earl:test rdf:resource="http://www.w3.org/TR/WCAG20-TECHS/G95"/>
<acc:step>1</acc:step>
<acc:problematicElement>IMG[attributes={height=695, src=graphics_new/index_v2.gif, border=0, usemap=#map, width=900}; value=[]]</
acc:problematicElement>
<acc:level>A</acc:level>
<earl:subject rdf:resource="http://www.iti.gr"/>
<earl:assertedBy rdf:resource="http://www.iti.gr/accessible/WCAG2.0_WebAssessmentTool.zip"/>
</earl:Assertion>
<earl:TestResult rdf:about="#result1">
<earl:outcome rdf:resource="http://www.w3.org/ns/earl#failed"/>
<dct:description>Number of <lt;IMG> elements with null "alt" attribute</dct:description>
<acc:tip>Provide a non-empty "alt" attribute to <lt;IMG> elements</acc:tip>
</earl:TestResult>
```

- PDF Version of EARL language

TestSubject	http://www.iti.gr
Title	Informatics and Telematics Institute
Date	Fri, 09 Jul 2010 12:58:53
Score	54.55
Software	http://www.iti.gr/accessible/WCAG2.0_WebAssessmentTool.zip
Title	WCAG2.0 Web Assessment Tool
Description	WCAG2.0 Web Assessment Tool is developed by CERTH/ITI within the premises of the ACCESSIBLE project
Success Criterion	<u>1.1.1</u>
Level	A
Mode	automatic
Outcome	failed
Technique	<u>G95</u>
Technique Step	1
Technique Description	Providing short text alternatives that provide a brief description of the non-text content
Technique Tests	<u>G95 test procedure</u>
Error Description	Number of elements with null "alt" attribute
Problematic Element	IMG[attributes={height=695, src=graphics_new/index_v2.gif, border=0, usemap=#map, width=900}; value=[]]
Tip	Provide a non-empty "alt" attribute to elements