



TECHNICAL DESCRIPTION **WEB DESIGN**



WorldSkills International, by a resolution of the Technical Committee and in accordance with the Constitution, the Standing Orders and the Competition Rules, has adopted the following minimum requirements for this skill for the WorldSkills Competition.

The Technical Description consists of the following:

1 INTRODUCTION	2
2 THE WORLDSKILLS STANDARDS SPECIFICATION (WSSS)	4
3 THE ASSESSMENT STRATEGY AND SPECIFICATION	8
4 THE MARKING SCHEME	9
5 THE TEST PROJECT	13
6 SKILL MANAGEMENT AND COMMUNICATION	16
7 SKILL-SPECIFIC SAFETY REQUIREMENTS	17
8 MATERIALS AND EQUIPMENT	18
9 VISITOR AND MEDIA ENGAGEMENT	21
10 SUSTAINABILITY	22

Effective 12.08.14

Stefan Praschl
Chair Technical Committee

Michael Fung
Vice Chair Technical Committee

© WorldSkills International (WSI) reserves all rights in documents developed for or on behalf of WSI, including translation and electronic distribution. This material may be reproduced for non-commercial vocational and educational purposes provided that the WorldSkills logo and copyright notice are left in place.



1 INTRODUCTION

1.1 NAME AND DESCRIPTION OF THE SKILL COMPETITION

1.1.1 The name of the skill competition is

Web Design

1.1.2 Description of the associated work role(s) or occupation(s).

Web Design encompasses many different skills and disciplines in the production and maintenance of websites. The diversity of the skills required by a web developer are many, often to the point it is difficult for a web designer to excel in all aspects. As a result, a team may cover the Web Design process, with each member of the team having their own strengths, specialties and role in the development process.

Web Design involves implementing specific solutions that follow the business rules and objectives outlined by the client. Web Designers develop a professional relationship with their clients, interacting with them in order to develop a deep understanding of the requirements and convert these into a website specification. Strong design and communication skills, coupled with research techniques and a grasp of target audiences, markets and trends, will ensure initial client satisfaction and credibility for the Web Designer.

Having completed the website planning and design, the Web Designer then integrates the website with third party tools and platforms. During the development process web designers design and develop the databases, create programs, tests and debug the website. The current trend is to also integrate the website with Social Media and take advantage of the leverage these modern platforms bring.

All these skills may apply equally to the re-design or an upgrade of an existing website.

A Web Designer has many employment opportunities. This can range from being a self-employed freelancer to being employed by media organizations and advertising agencies. Web Designer positions may be broad in scope or specialize in an area such as Graphic Design, Client Management, Front End Development, Back End/Server Side Development and User End Designer. Whichever role a web designer chooses to specialize in they will need to have access to ICT facilities, open source libraries and frameworks.

High performing Web Designers may have broad or specialist web-related skills. However, to excel they must have a strong grasp of copyright law and a well-developed personal code of ethics. They must understand artistic values, and take personal responsibility for being constantly at the forefront of trends and web technology. They must also be responsive to clients and have the ability to work in structured and unstructured teams and groups. These qualities enable the Web Designer to contribute and take advantage of this rapidly developing aspect of modern communications technology.

1.2 THE RELEVANCE AND SIGNIFICANCE OF THIS DOCUMENT

This document contains information about the standards required to compete in this skill competition, and the assessment principles, methods and procedures that govern the competition.

Every Expert and Competitor must know and understand this Technical Description.

In the event of any conflict within the different languages of the Technical Descriptions, the English version takes precedence.



1.3 ASSOCIATED DOCUMENTS

Since this Technical Description contains only skill-specific information it must be used in association with the following:

- WSI – Competition Rules
- WSI – WorldSkills Standards Specification framework
- WSI – WorldSkills Assessment Strategy (when available)
- WSI – Online resources as indicated in this document
- Host Country – Health and Safety regulations



2 THE WORLDSKILLS STANDARDS SPECIFICATION (WSSS)

2.1 GENERAL NOTES ON THE WSSS

The WSSS specifies the knowledge, understanding and specific skills that underpin international best practice in technical and vocational performance. It should reflect a shared global understanding of what the associated work role(s) or occupation(s) represent for industry and business (www.worldskills.org/WSSS).

The skill competition is intended to reflect international best practice as described by the WSSS, and to the extent that it is able to. The Standards Specification is therefore a guide to the required training and preparation for the skill competition.

In the skill competition the assessment of knowledge and understanding will take place through the assessment of performance. There will not be separate tests of knowledge and understanding.

The Standards Specification is divided into distinct sections with headings and reference numbers added.

Each section is assigned a percentage of the total marks to indicate its relative importance within the Standards Specification. The sum of all the percentage marks is 100.

The Marking Scheme and Test Project will assess only those skills that are set out in the Standards Specification. They will reflect the Standards Specification as comprehensively as possible within the constraints of the skill competition.

The Marking Scheme and Test Project will follow the allocation of marks within the Standards Specification to the extent practically possible. A variation of five percent is allowed, provided that this does not distort the weightings assigned by the Standards Specification.

2.2 WORLDSKILLS STANDARDS SPECIFICATION

SECTION		RELATIVE IMPORTANCE (%)
1	Work organization and management	6
	<p>The individual needs to know and understand:</p> <ul style="list-style-type: none">• Principles and practices that enable productive team work• The principles and behaviour of systems• The aspects of systems that contribute to sustainable products, strategies and practices• How to take initiatives and be enterprising in order to identify, analyse and evaluate information from a variety of sources	



	<p>The individual shall be able to:</p> <ul style="list-style-type: none"> • troubleshoot common web design and development problems • Take into account time limitations and deadlines • Debug and handle errors • Use a computer or device and a range of software packages • Apply research techniques and skills to keep up-to-date with the latest industry guidelines • Plan each day's production schedule according to available time • Include linked images, fonts, native files and production file format when archiving 	
2	Communication and Interpersonal skills	6
	<p>The individual needs to know and understand:</p> <ul style="list-style-type: none"> • How to solve communication problems including identifying the problem, research, analysis, solution generating, prototyping, user testing and outcome evaluation • The principles underlying the collection and presentation of information • Design concepts and techniques including wire framing, storyboarding, and creating flowcharts • Principles and techniques for the design of information 	
	<p>The individual shall be able to:</p> <ul style="list-style-type: none"> • Deliver a product that responds to client requirements and specification • Gather, analyse and evaluate information • Use literacy skills to interpret standards and requirements • Use planning and organizational skills to conduct user analysis • Critique own draft ideas, colour and type choices 	
3	Website Design	22
	<p>The individual needs to know and understand:</p> <ul style="list-style-type: none"> • Issues related to the cognitive, social, cultural, technological and economic contexts for design • How to create graphics for the web • How to create a design using a provided brief and specification • How to follow design principles and patterns • Which skills are required to design to utilize of colours, typography and composition • Principles and techniques for adapting graphics for use in website layouts • Different target markets and the elements of design which satisfy each market • Protocols for maintaining a corporate identity, brand and style guide • The limitations of Internet enabled devices and screen resolutions • How to provide consistency and polish to a finished design • Principles of an aesthetically pleasing and creative design • Current design trends 	



	<p>The individual shall be able to:</p> <ul style="list-style-type: none"> • Create, analyse develop visual response to communication problems, including understanding hierarchy, typography, aesthetics and composition • Create, manipulate and optimize images for the internet • Analyse the target market and the product being delivered • Select an idea that is most appropriate to the target market • Take into consideration the impact of each element that is added during the design process • Use all the required elements to create the design • Respect existing corporate identity guidelines and style guides • Create responsive designs that function correctly on multiple screen resolutions and/or devices • Keep the original design concept and amplify its visual appeal • Transform an idea into an aesthetically pleasing and creative design 	
4	Website Layout	22
	<p>The individual needs to know and understand:</p> <ul style="list-style-type: none"> • Best practice for accessibility and communicating with audiences with special needs • World Wide Web Consortium (W3C) standards for HTML and CSS • Website layout methods and standard website structures • Web accessibility initiative (WAI) • How to identify appropriate CSS rules and selectors to be applied to obtain the desired result • How to identify requirements for people with disabilities, including visual, auditory, physical, speech, cognitive, and neurological disabilities • Best practices for Search Engine Optimization (SEO) • How to embed and integrate animations, audio and video 	
	<p>The individual shall be able to:</p> <ul style="list-style-type: none"> • Use problem-solving skills to accommodate user groups with special needs • Use CSS in the most efficient and effective way for consistency between web browsers • Create web pages that function on a variety of devices and screen resolutions • Maintain consistency of layouts on multiple screen resolutions • Create websites that comply with current W3C standards (http://www.w3.org) and current W3C last call drafts. • Use CSS or other external files to modify the appearance of the website • Create and update websites to assist with Search Engine Performance • Create code that conforms and validates to the W3C standards 	
5	Client Side	22
	<p>The individual needs to know and understand:</p> <ul style="list-style-type: none"> • How to integrate JavaScript • How to create code with Open Source Libraries and Frameworks 	



	<p>The individual shall be able to:</p> <ul style="list-style-type: none">• Create website animations to assist in context explanations and adding visual appeal• Create and update JavaScript code to enhance a websites functionality and aesthetics• Add interactivity to websites	
6	Server Side	22
	<p>The individual needs to know and understand:</p> <ul style="list-style-type: none">• How to develop PHP (Hypertext Pre-processor) code• How to utilize Open Source server side Libraries and Frameworks• Data-modelling techniques to design and implement databases with MySQL• FTP (File Transfer Protocol) server and client relationships and software packages.• How to implement web services using PHP, XML (Extensible Markup Language) and JSON• Programming control structures (object-oriented programming)• How to develop code that follows design pattern (E.g.; MVC (Model View Controller))• How to create secure web applications	
	<p>The individual shall be able to:</p> <ul style="list-style-type: none">• Develop and design database queries and web services to match client requirements• Deliver a robust solutions to fulfil specific database requirements• Translate an ER (Entity-Relationship) diagram into a functioning database• Create an SQL (Structured Query Language) statements using correct syntax• Protect against security exploits• Integrate with existing code with API (Application Programming Interfaces), libraries and frameworks• Develop object-oriented code	



3 THE ASSESSMENT STRATEGY AND SPECIFICATION

3.1 GENERAL GUIDANCE

Assessment is governed by the WorldSkills Assessment Strategy. The Strategy establishes the principles and techniques to which WorldSkills assessment must conform.

Expert assessment practice lies at the heart of the WorldSkills Competition. For this reason it is the subject of continuing professional development and scrutiny. The growth of expertise in assessment will inform the future use and direction of the main assessment instruments used by the WorldSkills Competition: the Marking Scheme, Test Project, and Competition Information System (CIS).

Assessment at the WorldSkills Competition falls into two broad types: measurement and judgment. These are referred to as **objective** and **subjective**, respectively. For both types of assessment the use of explicit benchmarks against which to assess each Aspect is essential to guarantee quality.

The Marking Scheme must follow the weightings within the Standards Specification. The Test Project is the assessment vehicle for the skill competition, and also follows the Standards Specification. The CIS enables the timely and accurate recording of marks, and has expanding supportive capacity.

The Marking Scheme, in outline, will lead the process of Test Project design. After this, the Marking Scheme and Test Project will be designed and developed through an iterative process, to ensure that both together optimize their relationship with the Standards Specification and the Assessment Strategy. They will be agreed by the Experts and submitted to WSI for approval together, in order to demonstrate their quality and conformity with the Standards Specification.

Prior to submission for approval to WSI, the Marking Scheme and Test Project will liaise with the WSI Skill Advisors in order to benefit from the capabilities of the CIS.



4 THE MARKING SCHEME

4.1 GENERAL GUIDANCE

This section describes the role and place of the Marking Scheme, how the Experts will assess Competitors' work as demonstrated through the Test Project, and the procedures and requirements for marking.

The Marking Scheme is the pivotal instrument of the WorldSkills Competition, in that it ties assessment to the standards that represent the skill. It is designed to allocate marks for each assessed aspect of performance in accordance with the weightings in the Standards Specification.

By reflecting the weightings in the Standards Specification, the Marking Scheme establishes the parameters for the design of the Test Project. Depending on the nature of the skill and its assessment needs, it may initially be appropriate to develop the Marking Scheme in more detail as a guide for Test Project design. Alternatively, initial Test Project design can be based on the outline Marking Scheme. From this point onwards the Marking Scheme and Test Project should be developed together.

Section 2.1 above indicates the extent to which the Marking Scheme and Test Project may diverge from the weightings given in the Standards Specification, if there is no practicable alternative.

The Marking Scheme and Test Project may be developed by one person, or several, or by all Experts. The detailed and final Marking Scheme and Test Project must be approved by the whole Expert Jury prior to submission for independent quality assurance. The exception to this process is for those skill competitions which use an external designer for the development of the Marking Scheme and Test Project.

In addition, Experts are encouraged to submit their Marking Schemes and Test Projects for comment and provisional approval well in advance of completion, in order to avoid disappointment or setbacks at a late stage. They are also advised to work with the CIS Team at this intermediate stage, in order to take full advantage of the possibilities of the CIS.

In all cases the complete and approved Marking Scheme must be entered into the CIS at least eight weeks prior to the Competition using the CIS standard spreadsheet or other agreed methods.

4.2 ASSESSMENT CRITERIA

The main headings of the Marking Scheme are the Assessment Criteria. These headings are derived in conjunction with the Test Project. In some skill competitions the Assessment Criteria may be similar to the section headings in the Standards Specification; in others they may be totally different. There will normally be between five and nine Assessment Criteria. Whether or not the headings match, the Marking Scheme must reflect the weightings in the Standards Specification.

Assessment Criteria are created by the person(s) developing the Marking Scheme, who are free to define criteria that they consider most suited to the assessment and marking of the Test Project. Each Assessment Criterion is defined by a letter (A-I).

The Mark Summary Form generated by the CIS will comprise a list of the Assessment Criteria.

The marks allocated to each criterion will be calculated by the CIS. These will be the cumulative sum of marks given to each aspect of assessment within that Assessment Criterion.



4.3 SUB CRITERIA

Each Assessment Criterion is divided into one or more Sub Criteria. Each Sub Criterion becomes the heading for a WorldSkills marking form.

Each marking form (Sub Criterion) has a specified day on which it will be marked.

Each marking form (Sub Criterion) contains either objective or subjective Aspects to be marked. Some Sub Criteria have both objective and subjective aspects, in which case there is a marking form for each.

4.4 ASPECTS

Each Aspect defines, in detail, a single item to be assessed and marked together with the marks, or instructions for how the marks are to be awarded. Aspects are assessed either objectively or subjectively and appear on the appropriate marking form.

The marking form lists, in detail, every Aspect to be marked together with the mark allocated to it and a reference to the section of the skill as set out in the Standards Specification.

The sum of the marks allocated to each Aspect must fall within the range of marks specified for that section of the skill in the Standards Specification. This will be displayed in the Mark Allocation Table of the CIS, in the following format, when the Marking Scheme is reviewed from C-8 weeks. (Section 4.1)

CRITERIA										TOTAL MARKS PER SECTION
STANDARD SPECIFICATION SECTIONS										
TOTAL MARKS PER CRITERION										100

SAMPLE OF TABLE FROM CIS



4.5 SUBJECTIVE MARKING

Subjective marking uses the 10 point scale below. To apply the scale with rigour and consistency, subjective marking should be conducted using:

- benchmarks (criteria) to guide judgment against each Aspect
- the scale to indicate:
 - 0: non attempt;
 - 1-4: below industry standard;
 - 5-8: at or above industry standard;
 - 9-10: excellence.

4.6 OBJECTIVE MARKING

A minimum of three experts will be used to judge each aspect. Unless otherwise stated only the maximum mark or zero will be awarded. Where they are used, partial marks will be clearly defined within the Aspect.

4.7 THE USE OF OBJECTIVE AND SUBJECTIVE ASSESSMENT

The final deployment of objective or subjective assessment will be agreed when the Marking Scheme and Test Project are finalized. The table below is advisory only for the development of the Test Project and Marking Scheme.

SECTION	CRITERION	MARKS		
		Subjective	Objective	Total
A	Work Organization and Management	3	3	6
B	Communication and interpersonal skills	3	3	6
C	Website Design	14	8	22
D	Website Layout	10	12	22
E	Client Side	5	17	22
F	Server Side	5	17	22
Total		40	60	100



4.8 COMPLETION OF SKILL ASSESSMENT SPECIFICATION

There are to be a minimum of 10 and a maximum of 60 aspects of criterion in each module.

Competitors will be given all the necessary materials prior to the commencement of each module.

Criteria for objective marking

There can be four different types of objective criteria in the Test Project. In the table below is the explanation of the types.

TYPE	EXAMPLE	MAXIMUM MARKS	CORRECT	NOT CORRECT
Full or zero marks	Site Map dynamically linked to menu	0.50	0.50	0
Deduct from full marks	Code validate to XHTML 1.0 Strict [deduct 0.5 mark for each type of error]	2.00	2.00	0 – 1.5
Add to zero marks	CSS documentation (0.5) XHTML documentation (0.5)	1.0	1.0	0 – 0.5
Speed marks	Calculated based on what time Competitors complete a set task.			

4.9 SKILL ASSESSMENT PROCEDURES

Each Expert will perform as a member of a marking team of the final project.

Experts will be divided into marking teams allocating equal objective and subjective marking where possible. The composition of the marking teams will be decided by the CE and DCE with the aim of having a balance of new and experienced Experts in each.

Experts will be divided into different cultural groups for subjective marking where possible.



5 THE TEST PROJECT

5.1 GENERAL NOTES

Sections three and four govern the development of the Test Project. These notes are supplementary.

Whether it is a single entity, or a series of stand-alone or connected modules, the Test Project will enable the assessment of the skills in each section of the WSSS.

The purpose of the Test Project is to provide full and balanced opportunities for assessment and marking across the Standards Specification, in conjunction with the Marking Scheme. The relationship between the Test Project, Marking Scheme and Standards Specification will be a key indicator of quality.

The Test Project will not cover areas outside the Standards Specification, or affect the balance of marks within the Standards Specification other than in the circumstances indicated by Section 2.

The Test Project will enable knowledge and understanding to be assessed solely through their applications within practical work.

The Test Project will not assess knowledge of WorldSkills rules and regulations.

This Technical Description will note any issues that affect the Test Project's capacity to support the full range of assessment relative to the Standards Specification. Section 0 refers.

5.2 FORMAT/STRUCTURE OF THE TEST PROJECT

The format of the Test Project is modular with separately assessed standalone tasks.

5.3 TEST PROJECT DESIGN REQUIREMENTS

Test Project modules are to be developed within the assessment criteria framework given in paragraph 4.7 *The use of objective and subjective assessment*.

Experts with Special Responsibility (ESR) lead other Experts through the development of the Test Project modules, which are disclosed at the Competition. The Chief Expert and the Deputy Chief Expert choose ESRs as soon as they have the information of the participating Experts.

5.4 TEST PROJECT DEVELOPMENT

The Test Project MUST be submitted using the templates provided by WorldSkills International (www.worldskills.org/expertcentre). Use the Word template for text documents and DWG template for drawings.

5.4.1 Who develops the Test Project or modules

The individual modules are developed by separate Expert teams. Each team creates one module. Each team is led by an ESR.

5.4.2 How and where is the Test Project or modules developed

By the individual Expert teams on the Discussion Forum.



5.4.3 When is the Test Project developed

The circulated versions of each module will be ready and sent to the Technical Director to be made available via the WorldSkills website three (3) months before the competition. The Test Project modules will be changed a minimum of 30% by the Expert teams prior to the competition within the forum.

The Test Project is developed according to the following timeline:

TIME	ACTIVITY
Seven (7) months prior to the Competition	Experts are divided into Test Project module development teams by the CE and DCE. Each team of Experts will develop a specific module on a closed forum lead by their ESR.
Five (5) months prior to the Competition	First drafts of each module will be posted on the forum in the respective private Expert working team forum area.
Three (3) months prior to the Competition	Circulated Test Project modules are sent to the Technical Director to be distributed via the WorldSkills International website.
Three (3) months prior to the Competition	<p>After the Circulated Project has been sent to the Technical Director the Expert teams in the forum will start work on the minimum 30% change to their Test Project modules within the respective private Expert team forum area.</p> <p>The 30% change will be kept confidential and not disclosed to any other Expert outside of the Expert team or to any Competitor.</p>
One (1) month prior to the Competition	<p>Each team of Experts will have a working Project module with the minimum 30% change. Within the private working team forum area the following must be posted:</p> <ul style="list-style-type: none">Updated Marking ScaleUpdates Test ProjectChange documentAll media filesA completed sample project
At the Competition	The ESR for each Expert team presents their Test Project module with the minimum 30% change to all Experts. All Test Project files will be finalized.
At the Competition	Interpreters will have the opportunity to translate all Test Project files where required.

5.5 TEST PROJECT VALIDATION

The final Test Project modules will be validated by the respective Expert team prior to the Competition. CE and DCE will provide assistance to Expert teams for the validation. Expert teams will ensure that:

- The project can be completed in the specified time;
- The project can be completed with the provided material/media files;
- The marking schemes are appropriately developed;
- The Test Project meets the Technical Description.



5.6 TEST PROJECT SELECTION

Within each Expert team, the ESR will lead the development of a Test Project module. Experts will work collaboratively on the development of their Test Project module. Experts are required to participate in the forum to:

- Discuss and/or vote;
- Ask questions;
- Provide feedback;
- Develop their Test Project module.

If an Expert is absent from the Discussion Forum at the time the discussion and/or vote takes place the particular matter will not be raised or voted upon again, as per Competition Rules.

5.7 TEST PROJECT CIRCULATION

The Test Project is circulated via the website as follows:

Three months before the current Competition.

5.8 TEST PROJECT COORDINATION (PREPARATION FOR COMPETITION)

Coordination of the Test Project will be undertaken by the CE and DCE. The gathering of project data shall be the responsibility of the CE and DCE and should be forwarded to the Workshop Manager one month prior to the Competition.

5.9 TEST PROJECT CHANGE AT THE COMPETITION

Each of the individual module development teams make changes to the modules they are responsible for prior to the competition. The 30% change can be for example: remove one of the tasks in the module, change the provided materials of the task, make a new version of one of the tasks or add an extra task to the module. Any decisions made by Experts in the forum during the preparation period are made within the accordance of the Competition Rules.

5.10 MATERIAL OR MANUFACTURER SPECIFICATIONS

Specific material and/or manufacturer specifications required to allow the Competitor to complete the Test Project will be supplied by the Competition Organizer and are available from www.worldskills.org/infrastructure located in the Expert Centre.

Each module development team creates the media files where required for their module.



6 SKILL MANAGEMENT AND COMMUNICATION

6.1 DISCUSSION FORUM

Prior to the Competition, all discussion, communication, collaboration, and decision making regarding the skill competition must take place on the skill specific Discussion Forum (<http://forums.worldskills.org>). Skill related decisions and communication are only valid if they take place on the forum. The Chief Expert (or an Expert nominated by the Chief Expert) will be the moderator for this Forum. Refer to Competition Rules for the timeline of communication and competition development requirements.

6.2 COMPETITOR INFORMATION

All information for registered Competitors is available from the Competitor Centre (www.worldskills.org/competitorcentre).

This information includes:

- Competition Rules
- Technical Descriptions
- Marking Schemes
- Test Projects
- Infrastructure List
- Health and Safety documentation
- Other Competition-related information

6.3 TEST PROJECTS [AND MARKING SCHEMES]

Circulated Test Projects will be available from www.worldskills.org/testprojects and the Competitor Centre (www.worldskills.org/competitorcentre).

6.4 DAY-TO-DAY MANAGEMENT

The day-to-day management of the skill during the Competition is defined in the Skill Management Plan that is created by the Skill Management Team led by the Chief Expert. The Skill Management Team comprises the Jury President, Chief Expert and Deputy Chief Expert. The Skill Management Plan is progressively developed in the six months prior to the Competition and finalized at the Competition by agreement of the Experts. The Skill Management Plan can be viewed in the Expert Centre (www.worldskills.org/expertcentre).



7 SKILL-SPECIFIC SAFETY REQUIREMENTS

Refer to Host Country/Region Health and Safety documentation for Host Country/Region regulations.



8 MATERIALS AND EQUIPMENT

8.1 INFRASTRUCTURE LIST

The Infrastructure List details all equipment, materials and facilities provided by the Competition Organizer.

The Infrastructure List is available at www.worldskills.org/infrastructure.

The Infrastructure List specifies the items and quantities requested by the Experts for the next Competition. The Competition Organizer will progressively update the Infrastructure List specifying the actual quantity, type, brand, and model of the items. Items supplied by the Competition Organizer are shown in a separate column.

At each Competition, the Experts must review and update the Infrastructure List in preparation for the next Competition. Experts must advise the Technical Director of any increases in space and/or equipment.

At each Competition, the Technical Observer must audit the Infrastructure List that was used at that Competition.

The Infrastructure List does not include items that Competitors and/or Experts are required to bring and items that Competitors are not allowed to bring – they are specified below.

8.2 MATERIALS, EQUIPMENT AND TOOLS SUPPLIED BY COMPETITORS IN THEIR TOOLBOX

Competitors may bring the following items:

- Drawing materials;
- A maximum of one mouse;
- A maximum of one keyboard in the Competitors desired language. Note: If the keyboard brought by the Competitor does not work then a standard keyboard will be provided by the Competition Organizer;
- Language file for Microsoft OS to make the keyboard work correctly;
- A maximum of one drawing tablet;
- Headset.

Note: All materials brought in by the Competitors must not have any internal memory storage devices. The Web Design Experts and Workshop Manager have the right to disallow certain equipment brought by Competitors.

Music

Competitors will be allowed to supply on Familiarization Day a memory stick containing a maximum of 20 songs. In addition to the memory stick, Competitors may also supply a maximum of three original music CDs. All music will be collated and shared amongst all Competitors.



8.3 MATERIALS, EQUIPMENT AND TOOLS SUPPLIED BY EXPERTS

During the competition Competitors may have access to a limited number of Internet resources as required for each individual Module. Not all modules will make use of Internet resources. Except for these Internet resources, Competitors will not have access to the Internet from the Competitor workstations.

A common Internet workstation will be setup which Competitors can make use of twice a day (eight sessions - over the four days of competition). A maximum of ten minutes will be allocated to each session and any unused time cannot be re-allocated. Competitor Internet workstation sessions are not to be used consecutively; a minimum of one session must separate the use of the Internet workstation. During the time on the Internet workstation, Competitors are only allowed to surf the web. Competitors are not allowed to chat or communicate with others during the time on the Internet workstation. Experts will supervise the Internet workstation when it is in use by a Competitor.

8.4 MATERIALS AND EQUIPMENT PROHIBITED IN THE SKILL AREA

- Extra software;
- Mobile phones;
- Tablet devices;
- Photography/Video devices;
- Memory sticks;
- Equipment must not have any internal memory storage devices.

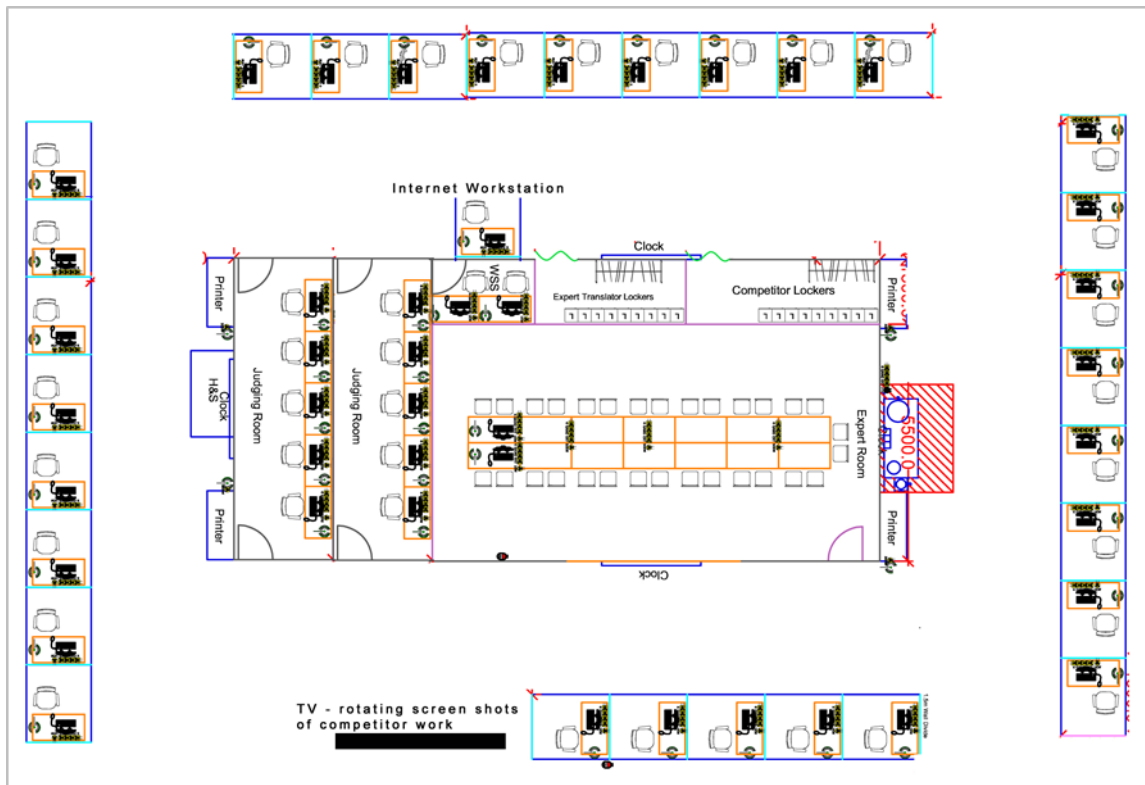
Note: The Web Design Experts and Workshop Manager have the right to disallow certain equipment brought by Competitors.



8.5 PROPOSED WORKSHOP AND WORKSTATION LAYOUTS

Workshop layouts from previous competitions are available at www.worldskills.org/sitelayout.

Example workshop layout:





9 VISITOR AND MEDIA ENGAGEMENT

Following is a list of possible ideas to maximize visitor and media engagement:

- Try a Trade;
- Display screens showing a combination of Competitor profile and screen capture of current work;
- Test Project descriptions;
- Enhanced understanding of Competitor activity;
- Career opportunities;
- People's Choice awards.



10 SUSTAINABILITY

- Recycling – No printing for Competitor workstations;
- Use of 'green' materials;
- Use of completed Test Projects after Competition;
- Limit the amount of software to be installed on Competitor workstations;
- Open source software.