4. Internationalization (I18N)

The mission of the W3C Internationalization Activity is to ensure that W3Cs formats and protocols are usable worldwide in all languages and in all writing systems.

The goal of the Internationalization (I18n) Activity is to ensure that W3Cs formats and protocols are open to all of the worlds languages, writing systems, character codes and local conventions. I18n reviews W3C publications, coordinates with the Unicode Technical Committee, the IETF, ISO committees, and the localization industry. I18n increases awareness of internationalization issues via conferences, workshops and articles. I18n produces specifications such as the Character Model for the World Wide Web, IRIs, and Ruby. I18n provided input on international typography in many Cascading Style Sheets (CSS) Level 3 modules. I18n also examines usage scenarios and requirements for the internationalization of Web services, and internationalization and localization requirements for schemas.

 I18n is shorthand for the first, last, and 18 middle characters in the word Internationalization. There are three major groups in the W3C Internationalization activity.

Internationalization Core Working Group

The Internationalization Core Working Group enables universal access to the World Wide Web by reviewing specifications produced by other W3C Working Groups and producing its own specifications. It proposes and coordinates the adoption by the W3C of techniques, conventions, technologies, and designs that enable and enhance the use of W3C technology and the Web worldwide, with and between the various different languages, scripts, regions, and cultures.

The mission of the Internationalization Core Working Group is to enable universal access to the World Wide Web by proposing and coordinating the adoption by the W3C of techniques, conventions, technologies, and designs that enable and enhance the use of W3C technology and the Web worldwide, with and between the various different languages, scripts, regions, and cultures.

The W3C Internationalization Activity was created in October 1995. In February 1998, the Internationalization Working Group was created, and has been rechartered regularly.

The charter of the activity proposes new work on Web Services Internationalization and Language and Locale Identifiers for the World Wide Web and to make sure that the necessary technology for the internationalization of Web services and other Web technology involving or implying processing of data is available in a timely manner to the industry at large.

The Internationalization Core Working Group (I18N Core WG) concentrates its activities on technical issues related to internationalization and universal access across the globe. It develops recommendations and notes related to internationalization and encompassing work related to international, linguistic, cultural, and writing system variations affecting W3C technologies.

The WG also reviews W3C technologies for internationalization issues as these technologies develop. This encompasses a broad array of cultural, linguistic, technical and accessibility concerns. Review work may also include standards created by external standards bodies and organizations related to internationalization.

The major deliverables of I18N Core WG has a combination of Recommendation Track, Working Group Note, liaison, and review.

Reviews: Review of W3C specifications is not a time-bound activity and is a crucial deliverable of the Internationalization Core Working Group. The Core Working Group reviews specifications of other W3C Working Groups for issues related to internationalization, global usage, and cultural sensitivity. Reviews are done as early as possible, but in many cases Last Call is the best stage for an in-depth review.

Web Services Internationalization: Deliver to Recommendation a specification or specifications for the exchange of preferences and configuration information that enable Web services to provide culturally sensitive or multi-lingual operation. This work will define SOAP and WSDL data structures and features that can be implemented in a composable manner. This will allow service descriptions to convey the capabilities of a specific service, including language

selection and sensitivity to user configuration options, as well as the mechanisms that allow language and locale negotiation, routing, and localization of the Web service interaction.

The inputs for this work are:

✦ Working Group Note: Web Services Internationalization Requirements

✦ Working Group Note: Web Services Internationalization Usage Scenarios

Language and Locale Identifiers for the World Wide Web: The WG will deliver a specification for Language and Locale Identifiers for the World Wide Web. It is based on and make use of an updated version of RFC 3066, that is the IETF specification for language identifiers. The specification for Language and Locale Identifiers for the World Wide Web may also allow the identification of locales or aspects thereof with URIs.

Character Model for the World Wide Web: The Character Model for the World Wide Web (CharMod) is an item of continuing work for the Core Working Group. This specification has been split into three parts. *Character Model for the World-Wide Web 1.0: Fundamentals* , *Character Model for the World-Wide Web 1.0: Resource Identifiers and Character Model for the World-Wide Web 1.0: Normalization.*

Test Suites: This WG will produce and maintain test suites for the specifications on Web Services Internationalization and on Language and Locale Identifiers for the World Wide Web to demonstrate interoperable implementations.

I18N GEO (Guidelines, Education & Outreach) Working Group

The I18N GEO (Guidelines, Education & Outreach) Working Group is helping to get the internationalization aspects of W3C technology better understood and more widely and consistently used.

The mission of the Internationalization Guidelines, Education & Outreach Working Group (GEO WG) is to help to make the internationalization aspects of W3C technology better understood and more widely and consistently used.

The GEO WG work closely with the Internationalization Core Working Group (I18N Core WG) and the Internationalization Tag Set Working Group (ITS WG). The GEO WG work to ensure that specification writers, web masters, content authors, and others involved in developing and implementing the Web understand the issues involved and the techniques available with regard to supporting international use of Web technology.

The GEO WG will also provide assistance to other WGs in the Internationalization Activity for publication of educational and outreach materials. The major deliverable sets for GEO are as follows:

Web Inernationalization Resources: The WG will continue to publish web pages on the Internationalization Activity site to assist users of W3C and related Web technologies to internationalize their approach. These will include: articles, notes and reference pages, articles based on frequently asked questions, and tutorials.

Techniques documents: The WG will build on existing work to create a series of techniques documents providing internationalization-related advice for users of Web technologies. These documents, aimed at Working Group Note status, make the information available in a task based fashion, at the point of need. The information in these separate documents will be drawn together by higher level web pages, targeted at specific user types and activities, that group and link to all relevant information in summary form, with an organization that aids their use.

Internationalization tests: The WG will build on the existing foundation to create additional test pages and a summary of results for major browsers. These tests explore support by user agents for internationalization related features, but also serve an educational role. They are initially intended to support the development of techniques documents and articles, but are not limited to that. The audience will be content authors as well as QA testers. In addition, other W3C WGs have found these tests of interest for their own test suites, and user agent development teams have found these tests valuable in terms of identifying, fixing or enhancing internationalization features or bugs.

Outreach activities: The WG will seek to regularly present knowledge developed by the WG at conferences and meetings where Web internationalization topics are relevant, and to maintain a presence in internationalization and localization related publications. It will also seek out key opportunities to present the internationalization message to content authors and implementers.

Topic areas: The GEO WG will attempt to respond to the needs of the Web community as they arise. This WG will aim to develop work in the areas such as Refine the Working Drafts of the Authoring Techniques for XHTML & HTML Internationalization , Engage in a dialogue with major search engine providers and incorporate the results into the techniques document Specifying the language of content 1.0 , Produce navigation-related advice for multilingual sites, Begin work on advice for authoring tool developers related to declaration of language and encoding in XHTML, Provide how-to information about use of multilingual features in XSLT.

ITS (Internationalized Tag Set) Working Group

The ITS (Internationalized Tag Set) Working Group will develop a set of elements and attributes that can be used with new DTDs/Schemas to support the internationalization and localization of documents. It will also provide best practise techniques for developers of DTDs/Schemas that show how to enable internationalization of their documents.

The mission of the Internationalization Tag Set Working Group (ITS WG) is to develop a set of elements and attributes that can be used with new DTDs/Schemas to support the internationalization and localization of documents, and to provide techniques for developers of DTDs/Schemas dealing with approaches that best support internationalization of their documents.

Sandardization of internationalization and localization related tags would benefit the developers and localization industry, particularly where automated translation tool technology is deployed. The W3C is engaged in development of the tag set and guidelines.

The proposed tag set will be offered as a set of recommended items for inclusion in DTDs and Schemas, and can also be used as a namespace. It is aimed at developers of XML document DTDs/Schemas. The tag set will make internationalization of DTDs and Schemas significantly easier and more straightforward.

The WG will develop a set of requirements for development of the internationalization tag set, Internationalization/localizability of tag set and Techniques for DTD/Schema internationalization and localizability.

Reference: www.w3.org