GILT in curriculum

We define GILT as - Globalization, Internationalization, Localization, Translation.

Background:

   For any person outside, I18N/L10n community, topics in GILT are alien, there being little understanding of it beyond literal meaning or definition. Any new person venturing into this domain, has a steep 'self-learning' curve, since there is no formal course taught in India around it[1], though there may be learning material on specific topics. But as a whole there is no single curriculum which covers are key topics in GILT, so learner can get good grip on it and further work in one of the specializations in it.

   Since first FUEL-GILT conference in 2013 a need for formal GILT curriculum was felt. One which becomes a learning reference point, and acts as template for formal courses to be launched either short term or long term. Considering this is being proposed by FOSS L10N community, there would be some bias towards learning GILT using FOSS technologies/methodologies.
Refer presentation GILT_in_Curriculum.odp

Why the need:
   ● It began primarily as how to get people interested in localization.
   ● While people do get involved in localization, it is limited to translation. Long term interest peters out due to lack of work opportunities.
   ● Except for courses by LRC, Univ of Limerick, Ireland - no other formal course has been seen. Ireland has big L10N industry due to this.
   ● While translation, NLP have formal courses, I18N, L10N etc are not covered.
   ● Very low awareness on GILT in students
   ● In industry beyond few product companies, view on GILT is simplistic as being just related to translation.
   ● Across industry & community there are very few people working in GILT (excluding translation agencies). It takes years of learning & experience in GILT.

Objectives:
(Elaborate more pointwise with what student/learner will learn).
   ● To provide a formal structure for GILT to be taught in various levels.
   ● To generate skilled man-power in the area of GILT.
   ● To enhance industry and academic interactions in GILT domain.
   ● To pioneer GILT education in India.

Use cases:
Formal course definition will also lead to applying GILT in interdisciplinary courses.

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[1] LRC, Univ of Limerick has some courses, globally other courses may be available which cover GILT topics. Links to them will included in appendix.

eg.
- Design institute - interested in Typography, font design.
- IT institute/company - interested in i18n/l10n technology & processes, tools.
- Language institute/dept - interested in linguistic aspects, computational linguistics, NLP.
- Journalists: Being regular users of translation of content and many a times technical glossary, journalists need to be oriented as well.
- Authors/Translators/language activists
- Localizers from different communities: To sync and have uniformity in localization and quick learning platform.

Course Delivery:
- How course will be delivered to students by univ/college.
  - Can be taught as short term (training) or long term (6 month semester course).
- Identification of faculty members/guest lecturers
- Reference material/books
- Practical/hands on work.

Topic Index

Below GILT topics have been outlined on what could/needs to be covered. Since this is starting point, currently it is not intended to be very detailed.

Unicode
Topic Owners:
Objective: Learn about character sets, Unicode standard and how to use in implementation
- Number systems
- Legacy character sets
- Pitfalls of 8 bit
- The need for universal character set
- Unicode history
- Unicode releases and versions.
- Code charts
- UTF formats
- Character properties
- UCA (sorting)
- Unicode in usage
  - Programming languages
  - Web
  - Databases

Locale
Topic Owners:
Objective: Understand locales, be able to customize, define or test locales.

- History , NLS, POSIX
- POSIX Locale categories
- Locale in Linux
- Windows Locales
- Defining a locale (glibc locale)
- Using locales in Linux.
- CLDR

Input methods

Topic Owners:

Objective: Understand how language input works (primarily keyboard based), be able to create new ones.

- Keymaps
- Console keymaps
- X keymaps
  - xmodmap
  - XKB
- X input method.
- IME - Input method environments
  - properties of an IME
- IMEs in use
  - IIIMF
  - SCIM
  - IBUS
  - IME in Windows
  - IME on Mac
  - Input on mobiles.
- Designing new keyboard/map

Internationalization

Topic Owners:

Objective: Learn I18N, issues, how to code as per i18n guidelines.

- Definition, importance
- Use cases
- Designing for I18N
- Common I18N issues.
  - Leading, string concatenation, hard-coding, etc.
  - Character handling
  - Regional formatting
  - Interoperability issues.
  - Handling complex text (CTL)
  - Text directionality (RTL)
- Internationalization QA
- I18N Tools

Localization

Topic Owners:

Objective: Understand and implement Localization projects

- Localizability.
- Resource formats
- Localization tools
- Translation memory/TMF
- Automatic translation
- L10N quality checking
- L10n testing
- L10n community management
- Best practices

Translation

Topic Owners:

Objective: Be able to work as translator, with various tools.

- Lost in translation
- Linguistic issues
- Standardization of terminology
- Style guide for translation.
- Translation review.
- Translation as service
- Translation Practice in FOSS: GNOME, KDE, Mozilla, LibreOffice, OpenStack, Fedora, Ubuntu. Translation Project (FOSS softwares) (may be added more names)
- Careers in translation
- Translation industry

Typography & Fonts

Topic Owners:

Objective: Learn aspects of typography, font designing

- Basic aspects
- Font elements/properties
- Font formats.
- Font design
    - Glyph design.
- Making Opentype fonts
- Font validation & testing
- Font tools.
- Using Fonts on desktop, mobile, web.

GILT Standards

Topic Owners:

- LISA
- Unicode
- W3C i18n/l10n

- XLIFF
- FUEL
- TILP/CLP

Appendix

LRC at Univ of Limerick - http://www.localisation.ie/ , runs MSc in Multilingual Computing and Localisation course, apart from research thesis (PhD).
Course outline http://www.localisation.ie/education/outline.php /
http://www.csis.ul.ie/course/LM632

https://www.linkedin.com/company/the-institute-of-localisation-professionals

References

Topic ownership

	Primary owners	Backup/will provide inputs
Unicode	Pravin Satpute	Chandrakant
Locale	Chandan kumar	Manoj Giri
Input Methods	Karunakar, Parag	Krishnababu
Internationalization	Karunakar, Parag	
Localization	MD Kulkarni	Biraj Karmakar
I18N/L10n/translation QA	Aman, Satya, Ani	Krishnababu
Translation	Rajesh Ranjan	Ravikant, Raviratlami
Typography & Fonts	Ravi Pande	Karunakar
GILT standards	Shankar Prasad	Manoj Giri