The Ivrix Project

http://ivrix.org.il

Towards a Hebrew Linux Distribution

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Things users expect from a Hebrew OS and application

- Ability to enter Hebrew text − everywhere
    - heading of graph, name in phone book
    - entries in forms
    - file names
    - paragraphs, and even whole documents, in Hebrew
- Combine RtL Hebrew with LtR numbers and English (and sometimes with other languages)
- A wide selection of Hebrew fonts
- Printing Hebrew
- Hebrew translation of menus and messages
- Hebrew translation of manuals and help files
- Hebrew (Jewish) calendar, and Jewish/Israeli holidays
- Hebrew spell checker
- Accepted standards for sharing Hebrew in
    - Text files
    - E−mail
    - Web pages (HTML)

An OS will never have a large market share in Israel without good Hebrew support.

Hebrew in commercial Operation systems

Microsoft Windows® (95/98/NT):

- Excellent, complete, Hebrew support in the OS, Office applications, and Internet Explorer.
- Local software with full Hebrew support, mostly based on the Hebrew−enabled OS.
- "Foreign" software still has minimal Hebrew support through OS support:
    - Hebrew fonts, bidirectional text entry, file names

Free Hebrew for Unix/Linux − What has already been done

Hebrew fonts for X Window System

- Iso8859−8 PCF fonts come with X (heb8x13, heb6x13) and with MIME (heb8x13B)
- Eli Marmor's fonts (PCF and type1)
- A wide selection of TrueType fonts

Encoding

- Iso8859−8 is most commonly used (224−250)
- Unicode or UTF8 are not commonly used

Input

- X and Linux console keyboard translations:

TeX Typesetting

- TeX−−XeT and e−TeX add bidirectional typesetting (nested, explicit)
- Hebrew Metafont fonts, and TrueType fonts
- LaTeX 2.09: styles for writing Hebrew documents
- LaTeX 2e: babel Hebrew support
- Support for bilingual bibliographies and indices
- Hebrew and bidi support in Omega and ArabTeX

More typesetting and word−processing

- Groff supports Hebrew fonts (but not bidi)
- Htroff (now obsolete) supported bidi
- Lyx experimental Hebrew and bidi support
- Other word processors: cex, yudit

Hebrew (Jewish) calendar:

- Jewish−calendar "date" and "cal" equivalents (hdate, hcal, taarich, lhdate, hebcal, kluach...)

Text editors

- Vim has
    - Hebrew keyboard map (Iso 8859−8)
    - Ability to mirror window, and edit in right−to−left mode (useful for editing TeX, and other "logical−order" files)
    - Reverse−insert mode for inserting "visual−order" Hebrew
- GNU Emacs and XEmacs support Hebrew to varying degrees (the subject of other presentations)

Spell checker

- Initial word list of 10,000 words (vowel−less)
- Nouns are automatically inflected, according to the correct rules (over 20 forms for each noun)
- Ispell support (not fully working)

Electronic mail

- Pine and pico support for visual−order ISO Hebrew
- No support for Microsoft’s implicit logical Hebrew

Terminal emulator and shell

- Xhterm: supports direction change, window mirror, and Hebrew keyboard mapping
- No Hebrew message catalogs for common shell utilities

Hebrew documents

- Too few manuals and Howtos in Hebrew.
- No accepted standard for Hebrew text files

Bidirectional widgets

- FreeBidi: a library implementing the Unicode bidi algorithm
- Gtk:
    - Reflected text−entry widgets
    - Prototype Gtk bidi text−entry widget
    - Hopefully, Pango will support Bidi in Unicode
- Qt: anticipated Unicode bidi and unicode support
- El−Mar sells vendors a bidi Motif replacement

Web browsers

- El−Mar sells a version of Netscape 3.01 supporting Hebrew pages (logical/implicit

bidi, and visual), bidi input in form, and a Hebrew user−interface.

- IBM has a similar product for a newer Netscape
- Support for bidi and Hebrew is planned in Mozilla; Development is backed by the Israeli Internet Society.

Goals of the Ivrix Project

Why was the Ivrix project conceived?

- People were doing a great job developing free Hebrew solutions, but each worked alone.
- Users did not have a single site from which to get all the Hebrew solutions.
- Awareness of the acute need for Linux Hebrew support was low, and development was very slow and uncoordinated.

What were the goals of Ivrix?

- Bring developers together so that they can
    - Coordinate development and share ideas.
    - Learn of ongoing development and help where such help is needed.
- A single site for all Hebrew Linux solutions
- Bring to the attention of the public and developers the need of Hebrew on Linux

Ivrix's development guidelines:

- Prefer adding Hebrew solutions into existing software, over writing new software.
- All code written for the Ivrix project will be "free" (GPL, if possible).
- Prefer solutions that can be accepted internationally, not just for Hebrew (e.g., UTF8, not Iso 8859−8).

The Status of Ivrix

- Ivrix was announced in June, 1999
- Three mailing lists were created:
    - Ivrix−announce: 103 members, infrequent newsletters written by a moderator.
    - Ivrix−discuss: 64 members discussing their developments, bugs, what needs to be done, etc. Traffic varies between 0 and 20 messages a week.
    - Ivrix−isc: 8 posting members, "steering committee". This mailing list, as is the committee, is inactive.
- FTP archive ftp.ivrix.org.il:
    - Sources of some of the available free Hebrew software, and also many fonts.
    - Pointers to the rest that was not yet mirrored.
    - Almost no binaries or RPM packages yet.
- Web site www.ivrix.org.il:
    - Announcements
    - Mailing list archives

Problems ahead for Ivrix:

- Web site is incomplete, and not very useful: more work will have to be put into it.
- FTP archive is incomplete: much more work needs to be done in integrating existing Hebrew software into a coherent distribution.
- Few people are actually doing any new coding.
- There’s much that still needs to be done.