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Luwrain: a text-based OS
for blind people

http://luwrain.org

Nature of work

Luwrain developing process implies three types of work:

1. Research of new text-based approach to interaction with PC's for blind people instead of accessible GUI
2. Preparing the *Java*-based implementation of the conclusions made during the research phase
3. Wrapping the prepared environment as a bootable and installable ISO-image based on the *Linux* kernel

Luwrain use cases

You may think of *Luwrain* in three different ways:

- ▶ *Operating system*: a stand-alone OS for desktops and laptops with additional browser (likely *Chromium* with *ChromeVox*)
- ▶ *Desktop*: an accessible environment and standard applications for launch on OS already installed on the machine (Microsoft Windows or anything else what supports Java)
- ▶ *Toolkit*: a toolkit on Java suitable for any vendor who may want to provide easily accessible and understandable application for blind people. Creating will not take a lot of resources and the result will be available on any platform with Java as well as on *Luwrain* stand-alone OS

Text-based environment fundamentals

- ▶ The rule number one is a *simplicity*. The interface must be evident and comfortable for any category of users including seniors
- ▶ Inspired by *Emacspeak*
- ▶ Entire screen is divided onto the rectangular tiles filled only with text data drawn using a monospased font
- ▶ Text font and color can be easily adjusted in system-wide manner to suit particular user needs
- ▶ The standard controls are prepared: lists, edits, menus, forms, trees etc
- ▶ None of the controls imply any essential visual data

Luwrain core

1. *Applications (add-on's) support*: user can install new applications and launch any number of them with easy way to switch between each other
2. *The design based on events processing*: it is easy to create custom handlers and new custom controls
3. *Popup windows support*: the application can show dialog window as a single method call
4. *Multithreading support*: the application can safely initiate required number of execution threads with real-time reflecting their progress on screen and through speech

Project status

- *Luwrain* is passing through the phase of project infrastructure setup
- Very preliminary prototypes were published on March 1st
- Main development efforts are applied to the environment core
- *Luwrain* very needs support of the organizations of any kind

Thank you!

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