



LUWRAIN

Computer has become accessible to people with limited and no eyesight, as well as for people with deafblindness

luwrain.org



About the problem

in numbers

~ 3 000 000	People with visual impairment in Russia
~ 40 000 000	Blind and visually impaired people in the world
~ 75 000 000	An estimate number of completely blind people by 2020 according to WHO

A constantly increasing number of blind people under the influence of various factors, even with the current level of medicine.

These people are deprived of the opportunity to comfortably and effectively use the achievements of scientific and technological progress.

About the project

What do we offer?

LUWRAIN - is an audible working environment for users with limited or no eyesight, as well as for those with deafblindness.

Familiar applications, such as browser, messenger and e-mail, have become available to special people.

LUWRAIN for MS Windows OS is available now as an application at <http://luwrain.org/download/windows>

Operation Principle

Voicing of each action on the computer with

a built-in voice engine and also:

- Simple vertical menu
- Absence of graphics
- Command line for quick access to any application
- Quick Zooming for the visually impaired
- Text duplication to Braille terminal

This approach **allows** the blind user, who has a completely different style of information perception, **navigate through each point of the system..**

```
Главное меню
Интернет
  Веб-браузер
  Найти в интернете
  Чат
  Почта
  Новости
  Википедия
  Твиттер
Книги и документы
  Электронные библиотеки
  Просмотр документов
  Рассказчик
Образование
  Электронная школа
  Проведение тестов
Инструменты
  Обзор файлов и папок
  Медиаплеер
  Адресная книга
  Блокнот
  Панель управления
Завершение работы
  Завершить работу в Luwrain

Рабочий стол
LUWRAIN 1.1.0

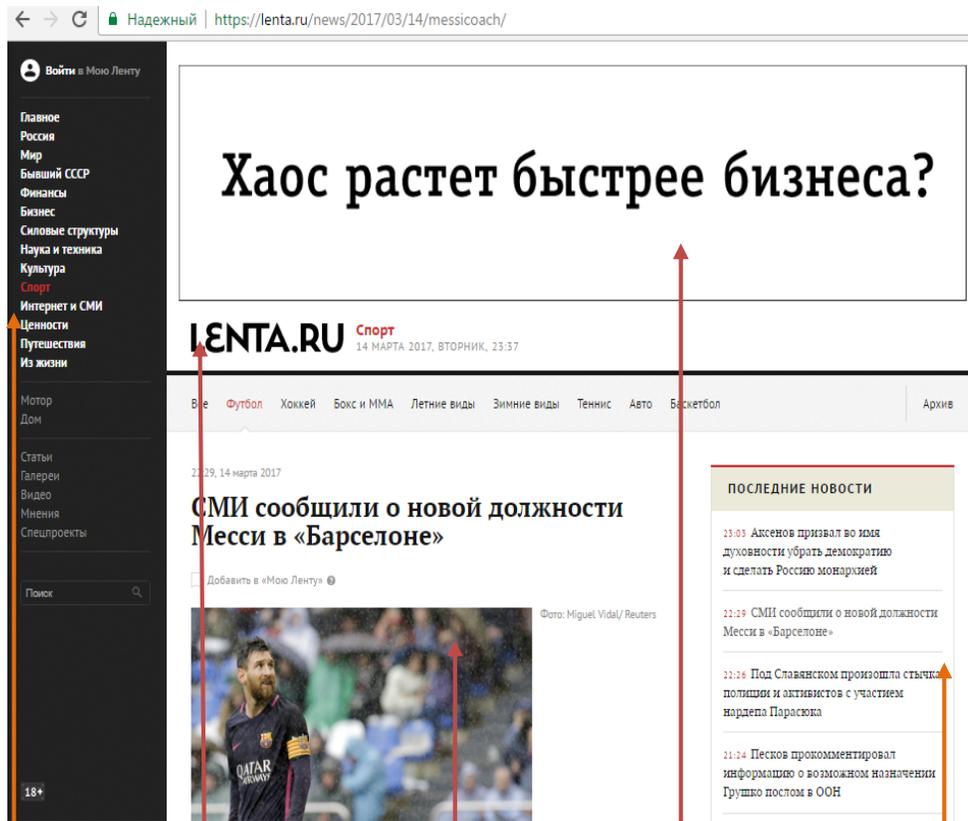
Для открытия главного меню нажмите Alt+Z
Для выхода из системы нажмите Alt+Q

Найти в интернете
Почта
Новости
Обзор файлов и папок
Медиаплеер
Блокнот
Учебник "Обществознание"
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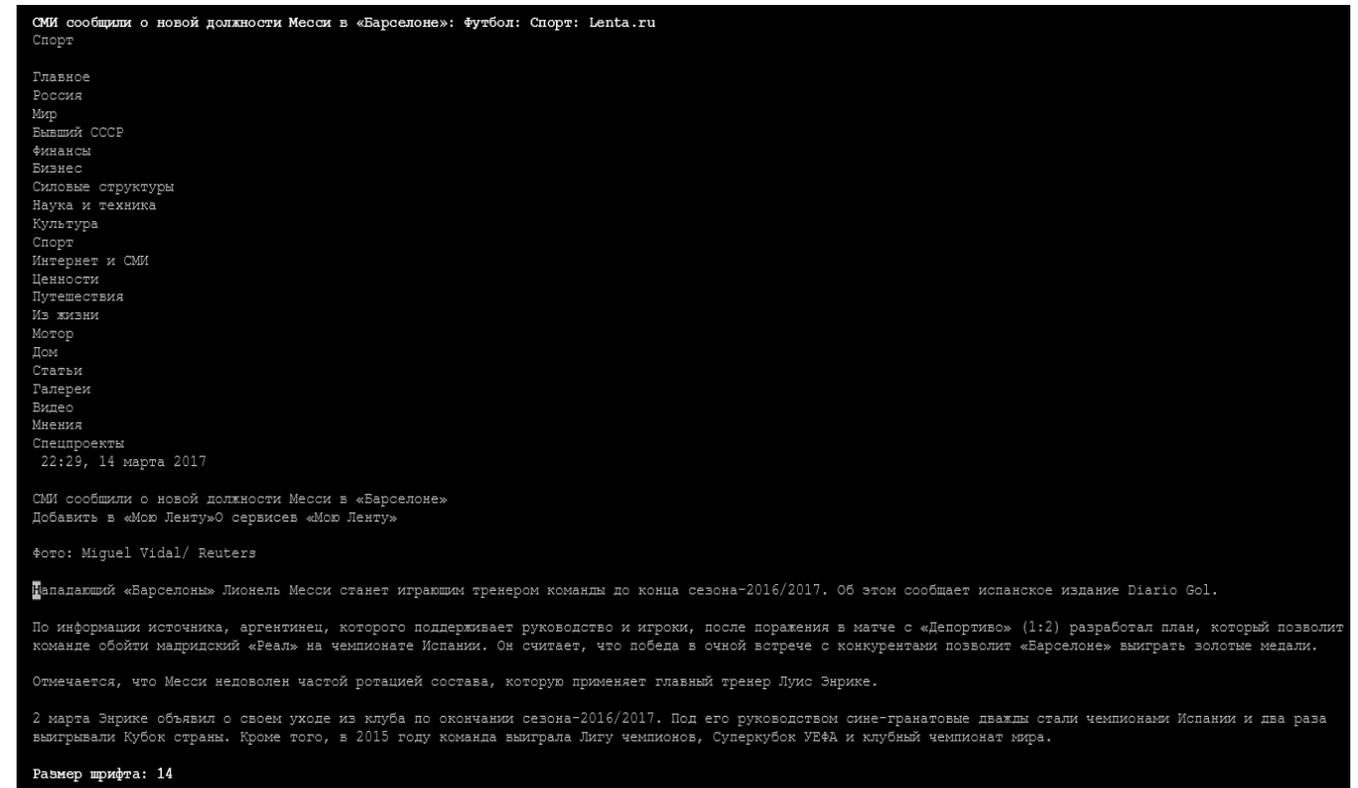
The difference in approaches

Left image - news in a web browser

Right image - the same news in LUWRAIN



- Blind person cant read it
- Non evident navigation through the menu



- + no unnecessary content
- + Intuitively clear navigation

Mission

Implementing the principles of socialization through functionality

The mission of the project is to improve the life of special people by achieving the basic directions of human socialization. For each direction there is a tailor-made application:

Directions	Awareness	Communication	Training	Job
Tailored applications	Browser	Messenger	Digital school	Office package
	News client	Email	Wikipedia	Software development environment
	Radio	Social networks	DAISY-textbooks for the blind	Interaction with third-party platforms

Features

Why is it convenient?

1. Easy to install and run

You only need to download the self-extracting installer as a file LuvrainInstaller.exe, run it, and everything else will do LUWRAIN or you can use a memory stick with a bootable LUWRAIN

2. Does not require help of a sighted person

The entire interface is adapted to the perception of the blind (and / or deafblind) users. The help of the sighted is not required including installation and operation

3. Fast and effective

Blind person works in LUWRAIN with the same speed and result as the sighted person in any operating system

4. Availability

LUWRAIN is completely free

5. User security and anonymity

Due to the complete absence of the interface, our technology allows the blind to be confident in their actions, that is, unambiguously understand what is happening at the moment within the working environment.



LUWRAIN Apps

luwrain.org





approbation

The system has been tested in:

1. Boarding school for the blind №1 in Moscow
2. Tomsk State University
3. Tomsk State Pedagogical University
4. School number 84 in Seversk (Tomsk region)
5. LUWRAIN Blind Computer Users Community

LUWRAIN functions

Extended list of applications

System:

- File manager
- Graphical interface for the visually impaired
- Braille display support
- Multilanguage user interface
- Auto boot from a LiveCD or LiveUSB
- Voice engine selection
- Cross-sectional search
- Control panel with individual settings
- Stream Reading
- Convert text to mp3
- Work with DAISY-format (create and playback)

Applications:

- Browser
- The "Telegram"
- Email client
- Twitter
- Wikipedia
- News client
- Text editor
- Text translation
- Media Player
- Radio
- Online Libraries

Telegram

Messenger for the blind and deafblind

The "Messenger" application is built on the basis of the well-known Telegram application and it is included in the standard supply of the LUWRAIN working environment.

"Messenger" allows you to use all the advantages of modern Programs that carry out mobile communication between users around the world without the loss of functionality and speed of communication.

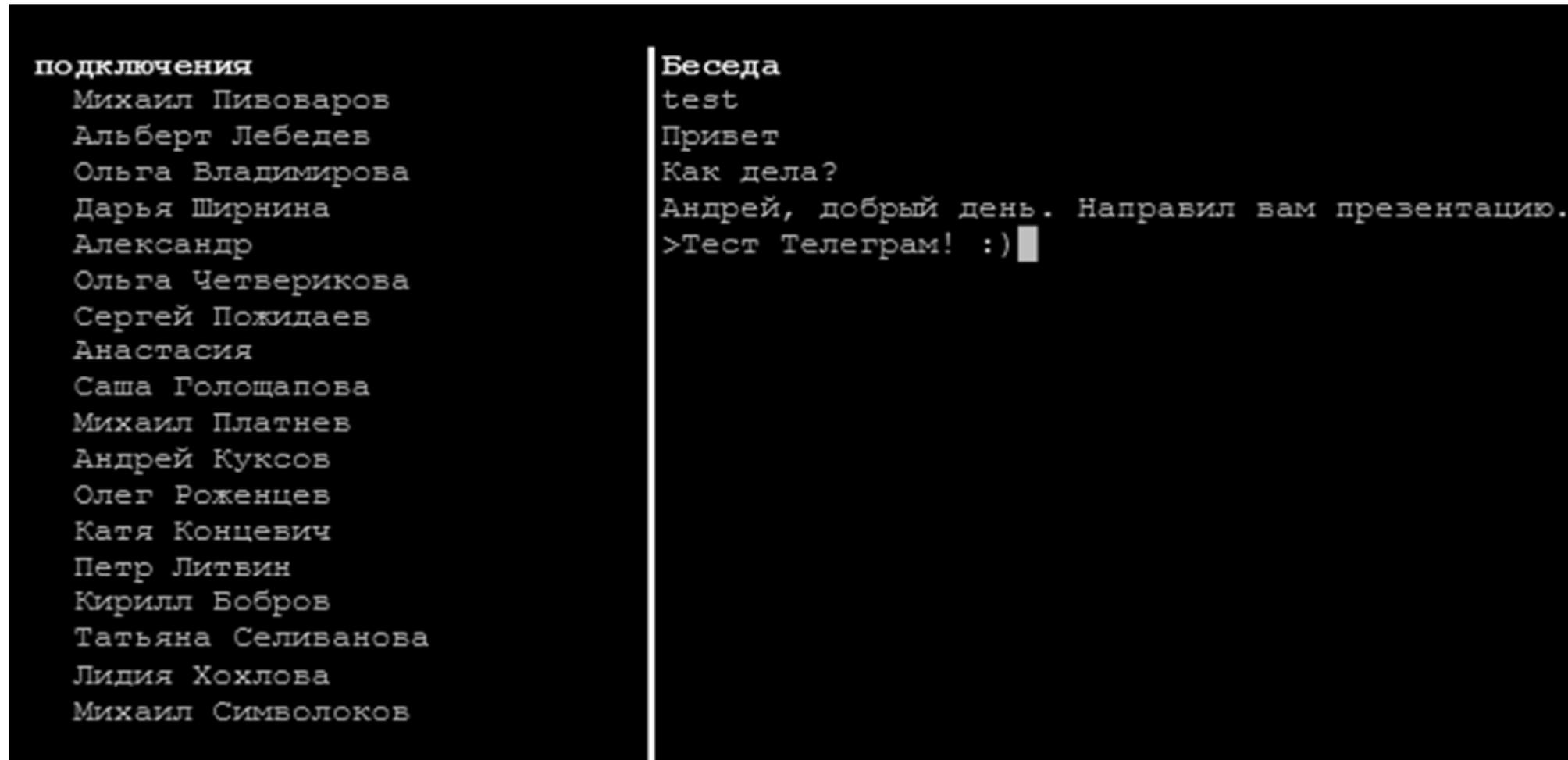
Blind and visually impaired users receive information through Speech synthesizer.

Deafblind people use the Braille display. The "Messenger" in LUWRAIN becomes one of the few ways to communicate deafblind people to the outside world

WhatsApp and Viber - are in the development process due 2018.

Telegram

Screenshot of the tailored messenger



Wikipedia

Screenshot of the tailored Wikipedia application

Сбербанк России — Википедия

Число сотрудников ▼ 325,075 тыс. человек[3] (2016 год)

Основное общество Банк России

Аудитор PWC

Сайт sbrf.ru

У этого термина существуют и другие значения, см. Сбербанк (значения).

Почтовая марка России, посвящённая 160-летию Сбербанка (2001)

Сбербанк (Сбербанк России[4]) — крупнейший российский универсальный коммерческий банк, контролируется Центральным банком Российской Федерации, которому принадлежит более 52% акций.[1][5].

Предоставляет широкий спектр банковских услуг. Доля Сбербанка в общем объёме активов российского банковского сектора составляла на 1 января 2016 года 28,7 %; на рынке частных вкладов — 46 %; кредитный портфель соответствовал 38,7 % всех выданных кредитов населению.

Бренд Сбербанка на начало 2010 года по оценке журнала «The Banker» и компании Brand Finance занимал 15-е место в рейтинге самых дорогих мировых банковских брендов и стоил приблизительно 11,7 миллиарда долларов[6].

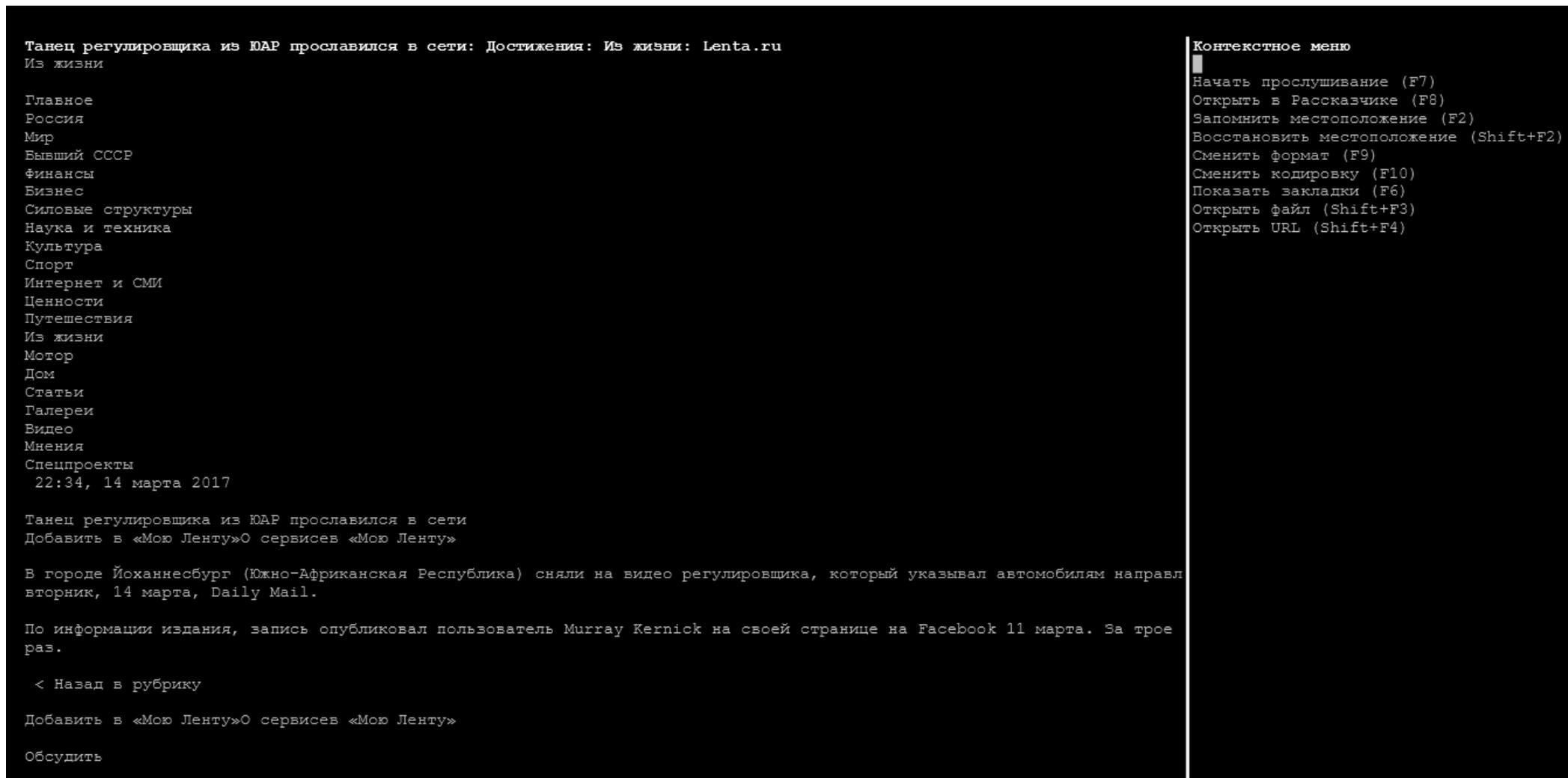
Центральный офис в Москве. По состоянию на середину 2016 года насчитывает почти 17,5 тыс. подразделений и 14 территориальных банков в 83 субъектах Российской Федерации.

Содержание

- История
 - Слияния и поглощения
- Собственники и руководство
 - Председатели правления Сбербанка России
- Деятельность
 - Показатели деятельности
 - Производственная система Сбербанка
- Территориальные банки Сбербанка России
- Дочерние организации
 - Оценки рейтинговых агентств
- Логотип и смена фирменного стиля
- Вклады советских граждан
- Общественный и политический бойкот
 - Бойкот на Украине
 - Санкции Евросоюза
- См. также

Browser

Screenshot of the tailored "Browser"



DAISY

Literature (educational and fine literature) for blind users

DAISY stands for Digital Accessible Information System. It is a digital format for recording digital "talking books". This format synchronizes voice of the speaker and the text.

Most importantly, a blind user has the opportunity to navigate directly across any type of the text and listen to the voice of the narrator from any point of this text.

LUWRAIN allows automatic synchronization of text and audio to create DAISY-books just by applying an mp3 and a text file.

Competitors

Current approaches

	Голосовые функции Siri / Google Now	Экранные чтецы MS JAWS, NVDA	LUWRAIN
Required help of the sighted when installing	-	+	-
For professional use	-	+	+
Use on different types of devices (mobile, desktop, external terminals)	+	-	+
Security for a special user	-	-	+
Popularity	+	+	-
DAISY support	-	+	+
Available messengers	-	-	+
Accessibility for deafblind (braille)	-	+	+
Free	-	-	+

International Experience

Conferences / publications / meetings / dissemination

- The demonstration of LUWRAIN to the now former governor of Tokyo Yoichi Masudoe
- An agreement with Canonical (the creator of the Ubuntu OS) regarding the allocation of resources and the development of LUWRAIN on mobile devices - London 2016
- Publications in the Linux Journal
- Participation in the Open Source Conf, Hong Kong
- Participation in the Impact Journalism Day
- Introduction of LUWRAIN computer literacy training in the rehabilitation centers for the blind in Armenia and Georgia