

Desktop Accessibility and UI Automation ...

Michael Meeks,
Novell.

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*“Stand at the crossroads and look; ask for the ancient paths, ask where the good way is, and walk in it, and you will find rest for your souls...” -
Jeremiah 6:16*

Novell®



Some industry reaction:

- The punch line – improving accessibility is a good thing.
- Microsoft did this one mostly right.

"I'm thrilled," said **Janina Sajka, Chair of the Open Accessibility Work Group** in the **Linux Foundation**. "Adding more toolkits to the ecosystem that interoperate is beneficial to the whole accessibility community. **We welcome Novell's expanding contribution to open accessibility development efforts on Linux.**"

"Microsoft's commitment to make the specification for **UIA freely available to others to implement**, coupled with Novell's plans to develop and deliver an adapter that allows Linux accessibility projects to work well with the UIA framework, are tremendous examples of how industry can come together to tackle interoperability problems for blind persons," said **Dr. Marc Maurer, President of the National Federation of the Blind**. "The NFB challenges the entire IT industry to continue to look for creative opportunities such as this to solve longstanding interoperability challenges and reduce development barriers to accessibility."

Excerpted from the press release: **emphasis mine.**

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*accessibility interoperability
technology
standards*



Welcome to AIA!

Welcome to the Web site of the Accessibility Interoperability Alliance (AIA). Initiated by the accessibility industry, the AIA is a group of leading Information Technology (IT) and Assistive Technology (AT) companies, content providers, and other key engineering organizations, working to create and harmonize standards for accessible technology.

Because the need for accessible technologies is growing -- an estimated one in four computer users today could benefit from some kind of AT application -- in addition to developing and enhancing standards, the AIA also works to ensure their mainstream adoption.

We invite all interested parties to join with us in these important initiatives.

<http://accessinteropalliance.org/>



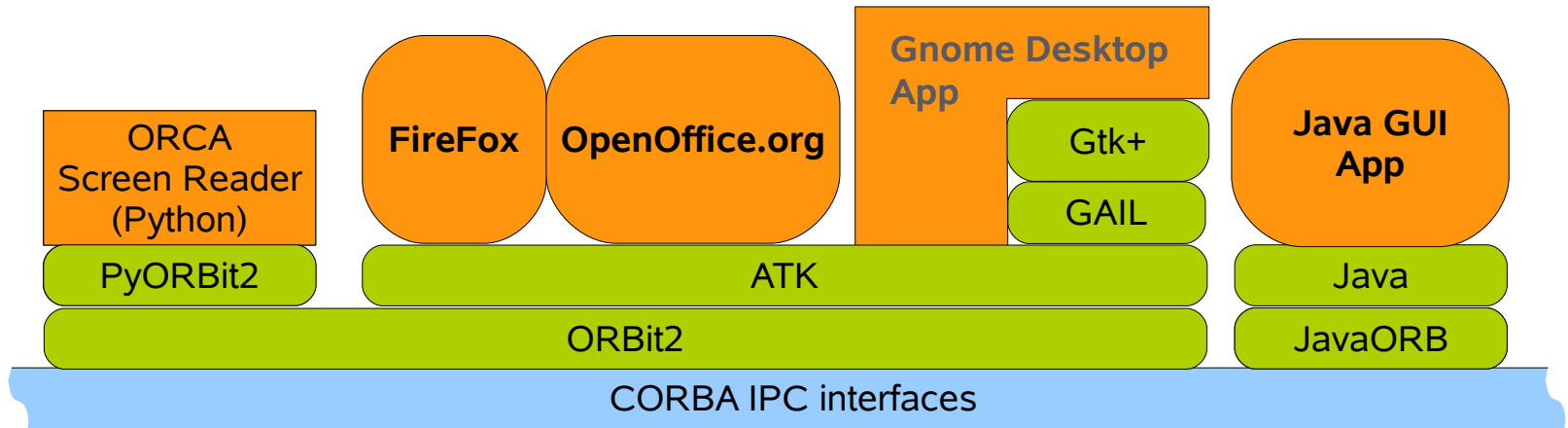
Standardizing things ...

- " Everything covered by the OSP
 - IT companies: Adobe, HP, MS, Novell, Oracle ...
 - AT vendors: too many to list ...
- " Working groups
 - UI Automation/Express Specification
 - Interoperability of Accessibility APIs (UIA/IAcc2)
 - WebARIA via UIA express
 - Common keyboard shortcuts wrt. Web Browsers.
- " Help drive convergence here ...

Grokking the design:



Existing Linux Accessibility Stack.





IAccessible2 ...

" Embrace & Extend !

```
Interface IAccessible2 : IAccessible {  
    [propget] HRESULT relation (  
        [in] long relationIndex,  
        [out, retval] IAccessibleRelation **relation  
    ); ...  
} http://accessibility.freestandards.org/a11yspecs/ia2/api/
```

" Really interesting – just an interface ...

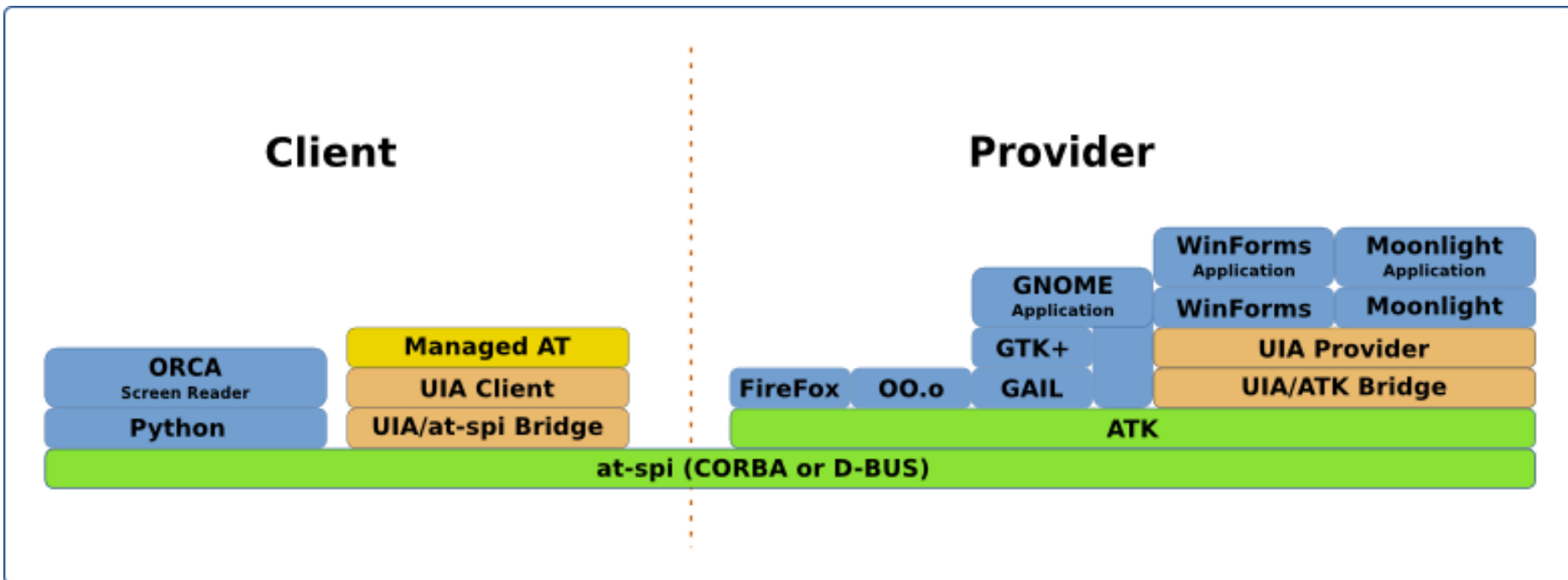
- Based on OO.o UNO a11y ...
- Implementations on both AT & apps:
 - > Lotus Symphony, JAWS, Firefox 3, OO.o 3.x

" Overview:

- > <http://www.linux-foundation.org/en/Accessibility/IAccessible2/Overview>



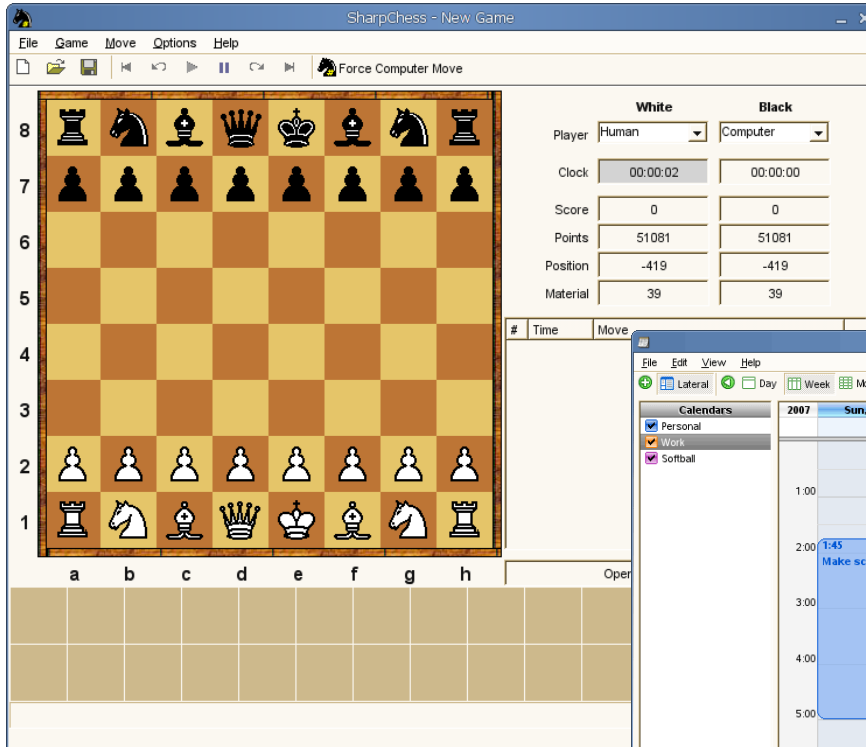
The aggregate end-goal stack:



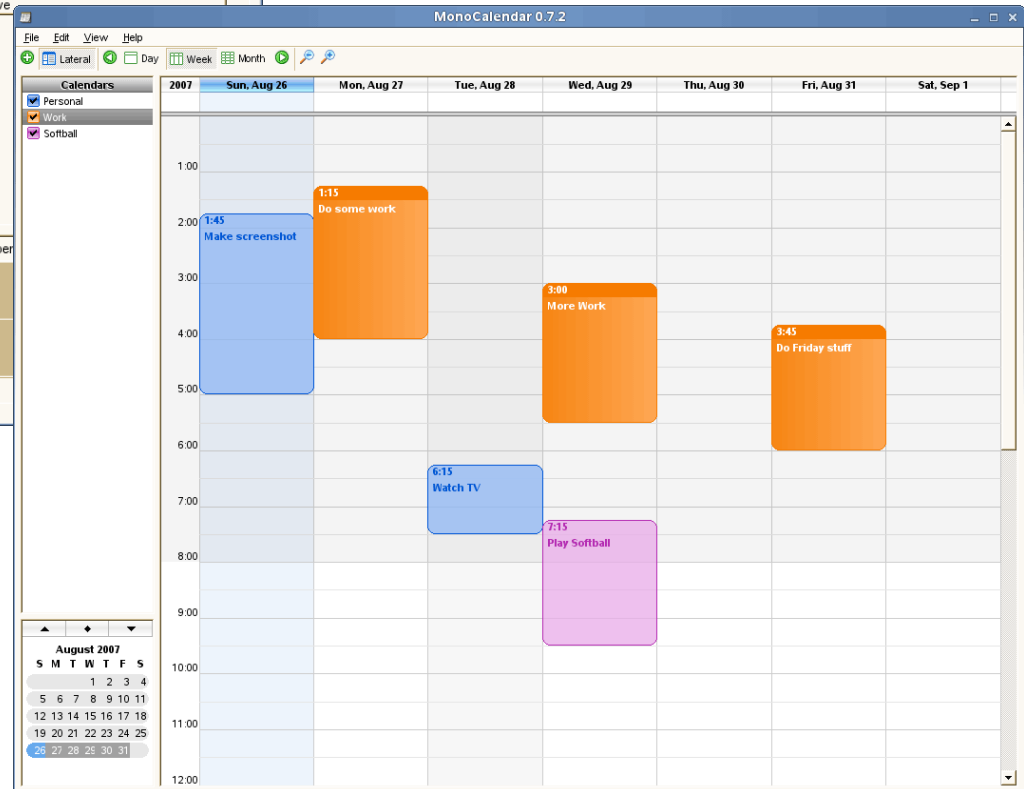
Why Bother ?



Mono / Winforms ...

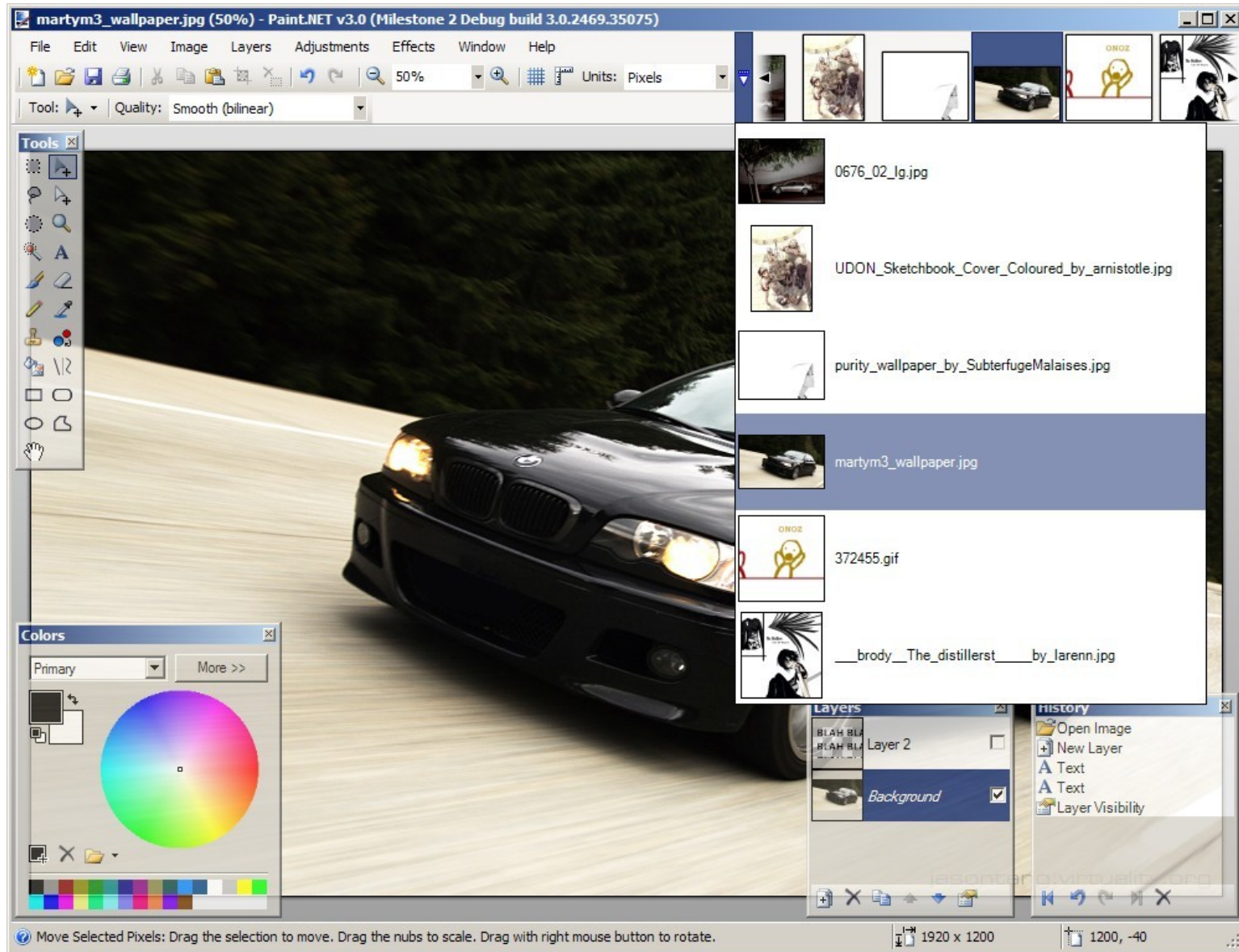


Generally small / vertical apps,
authored on Windows.



Paint.Net ...

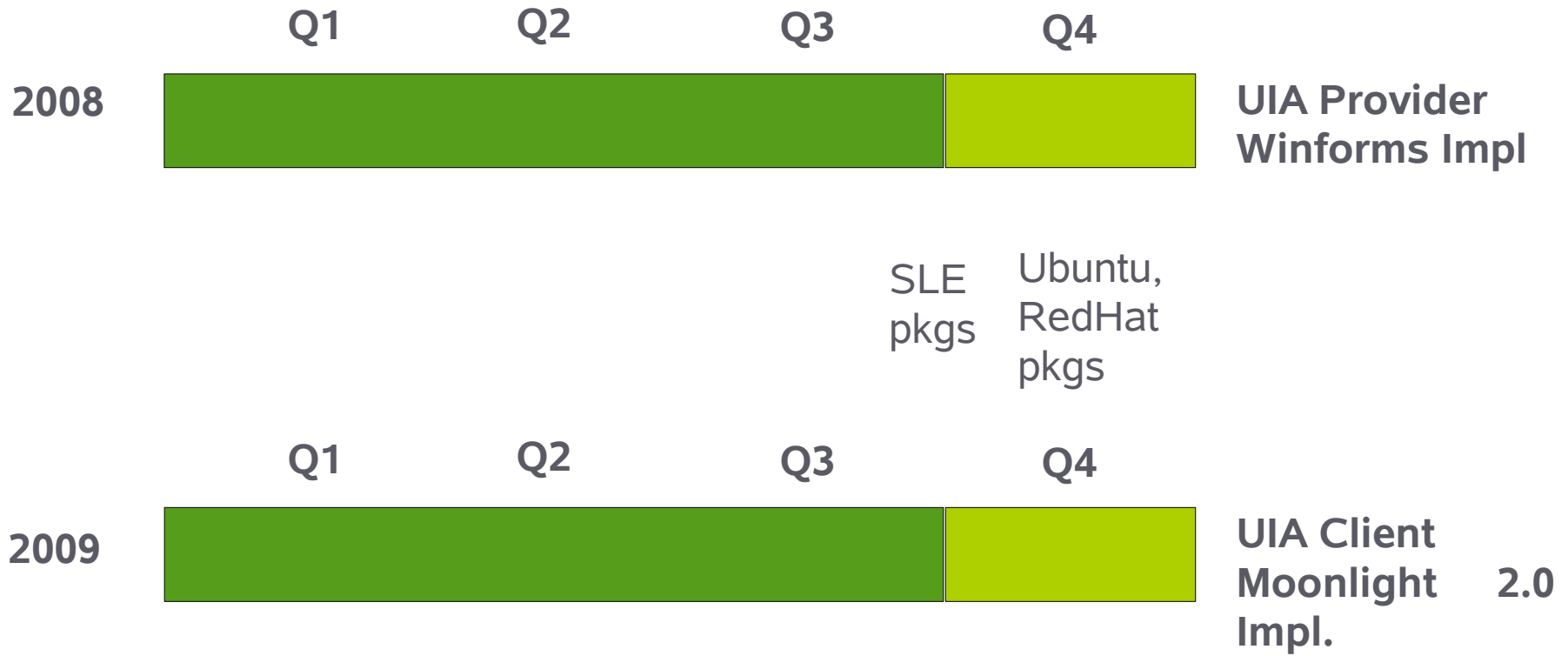
Not such a wonderful practical example perhaps.



Hacking ...



Timeline ...





Conclusion

Accessibility is coming of age ...

- Linux – the pre-eminent a11y platform, all APIs supported
- Credits:
 - Marco Skambraks – bearing the torch for OpenSUSE for years; suse-blinux
 - Sun Microsystems – visionary investment to bootstrap Gnome a11y
 - IBM – IAccessible2, Accerciser, Firefox 3 native accessibility
 - Microsoft – for finally starting to open up: UIA and the AIA
 - Calvin – dynamic tech. project leadership.
- Links:
 - <http://www.mono-project.com/Accessibility>
 - <http://calvinrg.blogspot.com/> **#mono-a11y / irc.gimp.org**

Oh, that my words were recorded, that they were written on a scroll, that they were inscribed with an iron tool on lead, or engraved in rock for ever! I know that my Redeemer lives, and that in the end he will stand upon the earth. And though this body has been destroyed yet in my flesh I will see God, I myself will see him, with my own eyes - I and not another. How my heart yearns within me. - Job 19: 23-27