

# Providing Shortcuts for Different Languages

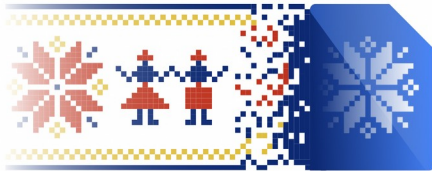
Gökay Şatır

Software Developer

[gokaysatir@collabora.com](mailto:gokaysatir@collabora.com)



Collabora  
Online



LibreOffice Conference  
Bucharest 2023





LibreOffice Technology

# Requirement

With Collabora Online, users can collaboratively work on a single document.

When a user opens a file with Collabora Office (Desktop) suite, they can use the shortcuts specific to their language. This was the same for Collabora Online but with an exception.

Once a file is opened with a language, other collaborators have to use the first person's language's shortcuts.

Users should be able to use their own languages' shortcuts when they are collaboratively editing a file.

The aim is to provide same comfort to Collabora Online they have when they use Collabora Office suite.



LibreOffice Technology

# Challenges

SfxViewShell holds the accelerator configuration implementation and executes the commands.

For every view, SfxViewShell has an AcceleratorExecute class for handling the operations.

The AcceleratorExecute class, in the first call, checks if shortcuts are loaded and cached.

If shortcuts are not cached yet, then a shortcut manager is created and shortcuts are loaded.

The problem is, even though every view has its own AcceleratorExecute class, they use a shared cache for the shortcuts.



LibreOffice Technology

# Challenges

LibreOffice suite is designed as a desktop application suite, therefore, it didn't need to support multiple views, multiple UIs nor multiple AcceleratorConfiguration instances, until Collabora Online arrives.

Many of the manager classes for UI, shortcuts, view etc were singleton classes. These singleton classes are not necessarily implemented with a singleton pattern but used as if they are singleton by the app.

The app checks if there is an instance of the class or not, if there is one, app only uses the pointer of already created class.

So, when a code piece calls a “create-foo” function, that function may not necessarily create a new instance of a class.



LibreOffice Technology

# Challenges

This “singleton classes” challenge was already beaten before, after Collabora Online needed multiple views for collaborative editing.

For providing shortcuts for different languages, we also needed to break the singleton barrier for AcceleratorConfiguration.

Shortcuts are loaded according to the UI language. And then they are cached in the class implementation.

To accomplish this, we needed to:

Change the UI language to the target language.

Create a new AcceleratorConfiguration class.

Cache the shortcuts for that language.

Set the accelerator class of the view.

Change the UI language back to its actual value.



LibreOffice Technology

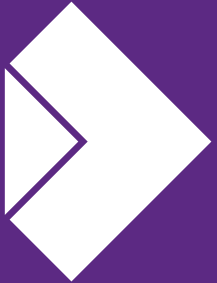
# Result

All the changes to the core API are done with checks, when LibreOfficeKit is not active, the changes cause no different behaviour for desktop users.

With Collabora Online: Users can now collaboratively edit documents while they use their languages' shortcuts.



LibreOffice Technology



Collabora  
Online

**Thank you!**

*Gökay Şatır*



@CollaboraOffice  
hello@collaboraoffice.com  
www.collaboraoffice.com