Developer's Guide

for version 4.0.0

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Version 4.0.0 - March 2018

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UI and UX

- http://www.google.com/design/spec/material-design/
- http://goodui.org/
  - Try Repeating Your Primary Action instead of showing it just once.
  - Try Distinct Clickable/Selected Styles instead of blurring them.
  - Try Undos instead of prompting for confirmation.
  - Try More Contrast instead of similarity.
  - Try Exposing Options instead of hiding them.
  - Try Showing State instead of being state agnostic.
  - Try Direct Manipulation instead of contextless menus.
  - Try Exposing Fields instead of creating extra pages.
  - Try Transitions instead of showing changes instantly.
  - Try Fewer Borders instead of wasting attention.
  - Try Designing For Zero Data instead of just data heavy cases.
  - Try Consistency instead of making people relearn.
  - Try Conventions instead of reinventing the wheel.
  - Try Visual Hierarchy instead of dullness.
  - Try Grouping Related Items instead of disordering.
  - Try Inline Validation instead of delaying errors.
  - Try Forgiving Inputs instead of being strict with data.
  - Try Bigger Click Areas instead of tiny ones.
  - Try Faster Load Times instead of making people wait.
  - Try Keyboard Shortcuts instead of buttons only.
  - Try Upfront Progress instead of starting with a blank.
  - Try Softer Prompts instead of modal windows.

    - Try Multifunctional Controls instead of more parts.
    - Try Icon Labels instead of opening for interpretation.
- http://designmodo.com/create-style-guides/
- http://uxmyths.com/

Frameworks & Tools

GNUstep

SOPE

JavaScript libraries

- https://angularjs.org/
- http://angular-ui.github.io/ui-router/
- https://material.angularjs.org/
- http://lodash.com/
- https://github.com/nervgh/angular-file-upload

Code Style

Objective-C

- To document the Web APIs, we follow the APIDOC standards.

```
apidoc -f ".*\\.m" -i UI -o Documentation/JSON-API
```

- When returning JSON from an object extending UIxComponent, use the following method:
  - (WOResponse *) responseWithStatus: (unsigned int) status andJSONRepresentation: (NSObject *) contentObject;

HTML

- Localize your strings:

```
<var:string label:value="I'm localized!"/>
```

- Localize your attributes:

```
<input type="text" label:placeholder="I'm localized!"/>
```

- Reuse existing localized strings as much as possible. Otherwise don't forget to update the English Localizable.strings file of the appropriate module.

JavaScript

- http://eslint.org/
- http://standardjs.com
- https://github.com/toddmotto/angularjs-styleguide

- https://github.com/angular/material/blob/master/docs/guides/CODING.md
- http://jshint.com/
- https://github.com/angular/material/tree/master/docs/guides
- We conform to Airbnb coding standards. Use jscs with the *airbnb* preset to validate your code style:

```
jscs -p airbnb *.js
```

- For documentation, we follow the JSDoc3 standards:

```
jsdoc UI/WebServerResources/js/{Common,Contacts,Mailer,Preferences,Scheduler}/
*.js -d Documentation/JavaScript-API
```

Models (facades)

- Move business logic into models and share them.
- Keep it simple, separate server interaction and error handling from the model. That way model only handle data processing and code is easier to maintain.

Controllers

- Functions not exposed in the controller must be prefixed with an underscore.

SASS/CSS

- http://componentcss.com/
- https://github.com/styleguide/css
- https://smacss.com/
- http://cssguidelin.es/
- http://sixrevisions.com/css/css-methodologies/
- https://css-tricks.com/what-a-css-code-review-might-look-like/
- http://una.im/classy-css/
- http://stylelint.io/

A `@mixin` is like a stamp: it creates a duplicated version of the property block (optionally) with arguments provided. An `@extend` appends the element you are extending to the property block. It is your "yes, and _" statement.

- For documentation, we follow SassDoc annotations.
- FlexBox compatibility http://caniuse.com/#feat=flexbox

Fonts

- Mozilla Fira
- Material icons

Building frontend

- Install the latest stable release of Node.js
- Install grunt

```
npm install -g grunt-cli
npm install -g bower
```

- We need the SASS files of Angular Material to build our CSS. The git repository of Angular Material is included as a submodule of SOGo:

```
git submodule init
git submodule update
```

- Generate the JavaScript and CSS files

```
cd UI/WebServerResources
npm install
bower install
grunt build
```

Defining an alternate color theme

SOGo relies on the theming system of Angular Material to define the colors of the Web interface.

To overwrite the default theme in SOGo, set the following parameter in `/etc/sogo/sogo.conf`:

```
SOGoUIAdditionalJSFiles = (js/theme.js);
```

Edit `theme.js` under `/usr/lib64/GNUstep/SOGo/WebServerResources/js` or `/usr/lib/GNUstep/SOGo/WebServerResources/js` depending on your platform and restart sogod.

Version Control

- https://devcharm.com/articles/46/improve-your-git-workflow/
- https://github.com/angular/material/blob/master/docs/guides/CONTRIBUTING.md#-commit-message-format
- Each commit should cover only one thing;
- Begin the commit message with a single short (less than 50 characters) line summarizing the change, followed by a blank line and then a more thorough description;
- When fixing a bug, commit to the devel branch as well as the maintenance branch of the latest release version (named maintenance/x.y). When a ticket is associated to the bug, add to the description a line saying **Fixes #1234**.
- `git pull` may introduce inconsistencies and problems. Replace it with the following alias:

```
git config --global alias.up '!git remote update -p; git merge --ff-only @{u}'
```

Testing

- https://github.com/angular/protractor
- http://karma-runner.github.io/

JSON API

One practical way to test the JSON API is to use `curl`. To do so, you need to enable `SOGoTrustProxyAuthentication` and configure HTTP authentifcation in Apache. You can pipe the result to jq to nicely format and filter the output:

```
curl -u username:password http://localhost/SOGo/so/username/Calendar/
calendarslist | jq '.'
```

```
curl -u username:password -H 'Content-Type: application/json' -d '{}' http://
localhost/SOGo/so/francis/Calendar/personal/71B6-54904400-1-7C308500.ics/save
```