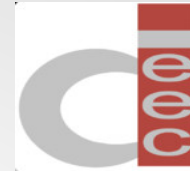




GLOBAL ONLINE SCIENCE LABS
INQUIRY LEARNING AT SCHOOL



EDIT

PREVIEW

APP COMPOSER

Web app authoring tool

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CONTEXT AND BACKGROUND

Two types of existing authoring tools for web apps

- Programmer or developer: Code Editor
- Instructor: Visual Design tool (drag & drop)

CODE EDITORS

Google Gadget Ads Editor

Welcome to the Google Gadget Ads Editor!

The Google Gadget Ads Editor (GGAE) is a fully-equipped gadget development tool that lets you quickly create and test gadgets prior to submitting it for review. GGAE contains a variety of features that empower you to get your gadgets running on our content network in a shorter period of time. For more specific information on how to use GGAE, see the Getting Started page.

Editor | Preview | Validate

```
1 <?xml version="1.0" encoding="UTF-8" ?>
2 <Module>
3   <ModulePrefs title="My Gadget Ad" width="300" height="250" sci
4     <Require feature="ads"/>
5     <Require feature="flash"/>
6   </ModulePrefs>
7   <UserPref name="clickurl" datatype="hidden" default_value="DEE
8   <UserPref name="aiturl" datatype="hidden" default_value="DEBUI
9   <Content type="html"><![CDATA[
10  <!--
11    Embeds a single Flash file in the gadget ad and sets the c
12    to match the ad size.
13  -->
14  <div id="fc"></div>
15  <script>
16    // Replace the SWF URL below with your own
17    var swfUrl = 'http://gadgetads.googlecode.com/svn/trunk/te
18  </script>
19  </Content>
20 </Module>
```

OpenSocial Explorer | Home | Explore | OpenSocial

Welcome | Render

gadget.xml | welcome.html | welcome.css | welcome.js

```
1 <?xml version="1.0" encoding="UTF-8"?>
2 <!--
3  * Licensed to the Apache Software Foundation (ASF) under one
4  * or more contributor license agreements. See the NOTICE file
5  * distributed with this work for additional information
6  * regarding copyright ownership. The ASF licenses this file
7  * to you under the Apache License, Version 2.0 (the
8  * "License"); you may not use this file except in compliance
9  * with the License. You may obtain a copy of the License at
10  *
11  * http://www.apache.org/licenses/LICENSE-2.0
12  *
13  * Unless required by applicable law or agreed to in writing,
14  * software distributed under the License is distributed on an
15  * "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY
16  * KIND, either express or implied. See the License for the
17  * specific language governing permissions and limitations
18  * under the License.
19 -->
20 <Module>
21   <ModulePrefs title="Welcome Gadget" description="Welcome people
22   to the OpenSocial Explorer">
23     <Require feature="minimessage" />
24   </ModulePrefs>
25   <Content type="html" href="welcome.html">
26 </Content>
27 </Module>
```

© OpenSocial Foundation 2013

type code ⇒ run* ⇒ fix mistakes ⇒ save

VISUAL DESIGN TOOLS

The screenshot displays the MyCocktail Romulus Mashup Builder interface. The main window is titled "Widget Authoring Toolkit" and contains several panels:

- Library:** A tree view on the left showing various renderers and packages.
- Actions:** A central workspace for configuring widgets, showing a "romulusblog (Romulus Blog)" widget with fields for "option: nicola: Statistics" and "statistic: User".
- All Components:** A list of available widgets including Analog Clock, Current Time, Deadline, Digital Clock, Stopwatch, Current time & date, and Visual Countdown.
- Tasks:** A table showing task details for a widget template.
- Component Style:** A panel for configuring the visual appearance of the widget, including theme, text alignment, text color, background color, and block alignment.
- Edit table 1:** A table for editing data within the widget.
- Save Widget:** A dialog box for saving the widget, including fields for title, description, use case, design status, and a WIDGAT link.

New Widget
Select template

BlankTemplate ToDoTemplate TimerTemplate

Page 1 / 3 Back Next Finish



New Widget
Widget Description

Title: [text field]
Description: [text area]

Author

Name: [text field]
Email: [text field]
Link: [text field]
Organisation: [text field]

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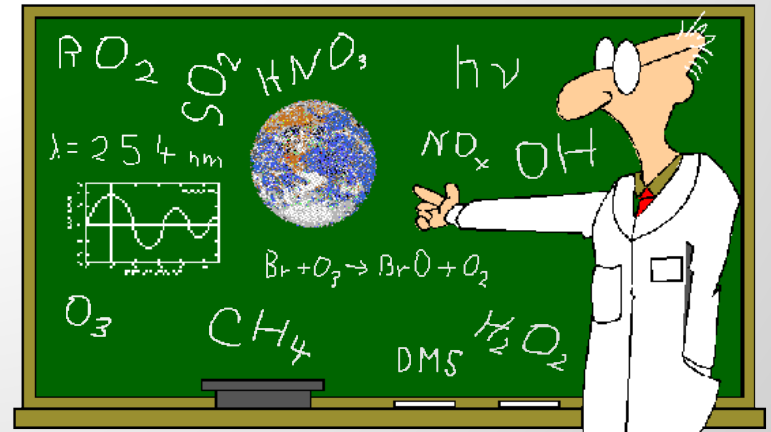
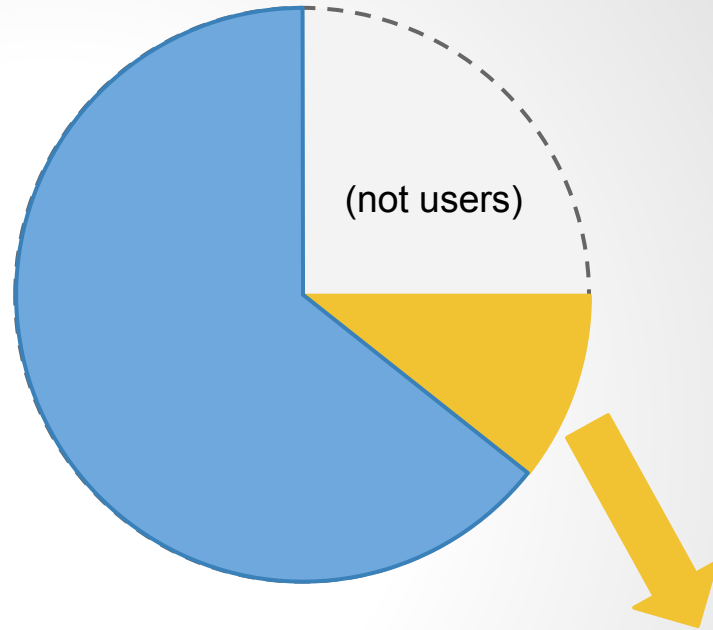


New Widget
Usecase

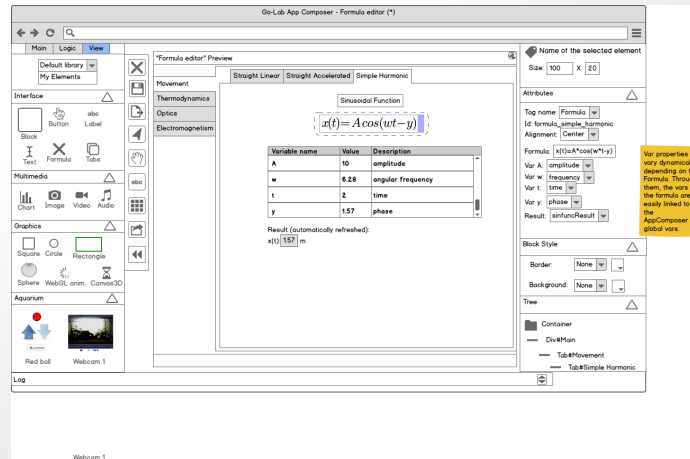
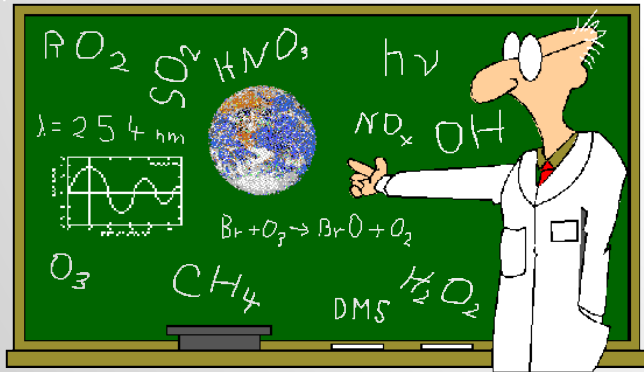
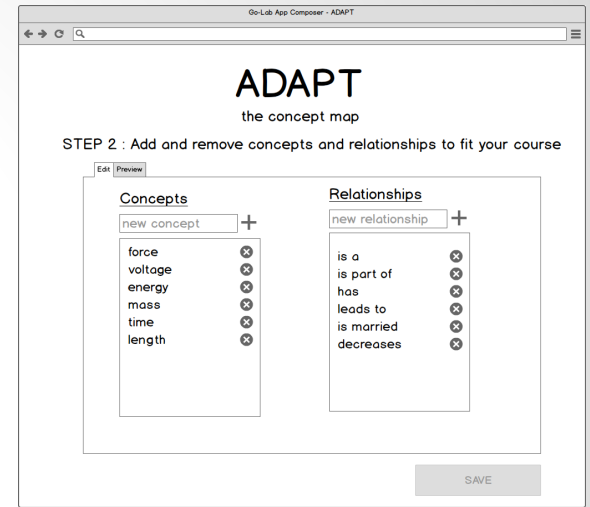
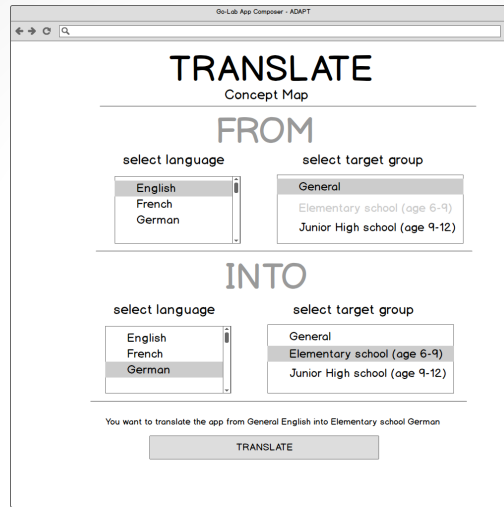
Keywords: [text field]
Persons: [dropdown menu]
Persona Details: [text area]
Scenario Details: [text area]

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WHAT ABOUT THE USER BASE?



ONE TOOL FOR TWO WORLDS



IMPLEMENTATION (I)

- Server side: Python Flask framework



- HTML and XML templates
- Program logic: HTTP request routing

- Client side:



- Twitter Bootstrap Front-end framework
- Form inputs and tabbed navigation (2 steps: edit & preview)

**Zero installation
requirements***



Ease of Use

* Documentations available: <http://appcomposer.readthedocs.org/>

IMPLEMENTATION (II)

http://weblab.ieec.uned.es/golab/appcomposers/antonio Index

App Composer

Home

Admin

About

Contact

App Composer

Build supercool apps for your students!

Use it!

Learn more

Translator composer

Adaptor composer

Expert mode

Generic layer. Provides:

- User management
- App storage
- App publication queue
- App publication
- Generated app caching
- App permissions (public, hidden, private...)
- etc.



CURRENT FUNCTIONALITY

Repository

- personal user account (profile, list of apps)

Translate apps

- in different languages
- targeting misc. groups (8-15 years old)



Adapt learning apps

- customize an app from a list of available tools
- preview and publish the final result in the Portal

TRANSLATOR: LOCALIZATION

Select the translation (2)

- testuser's all_ALL_14-18
- testuser's all_ALL_ALL

Translation

blue	Bluez	
	Blue	✓
gray	Gray	
	Gray	✓
purple	Purplez	
	Purple	✓
color	Color	
	Color	✓
green	Greenz	
	Green	✗
black	Black	
	Black	✓

« Go Back Accept Discard

i18n support for OpenSocial and standalone apps

ADAPTOR: CUSTOMIZING APPS

App Composer Home Profile Apps Composers Administrator Log out

Adapt a guidance app - Concept Mapper -

Edit Preview

Please type the terms or comma-separated values you wish to save. (Hint: copy & paste concepts is supported in input fields).

List of Concepts:

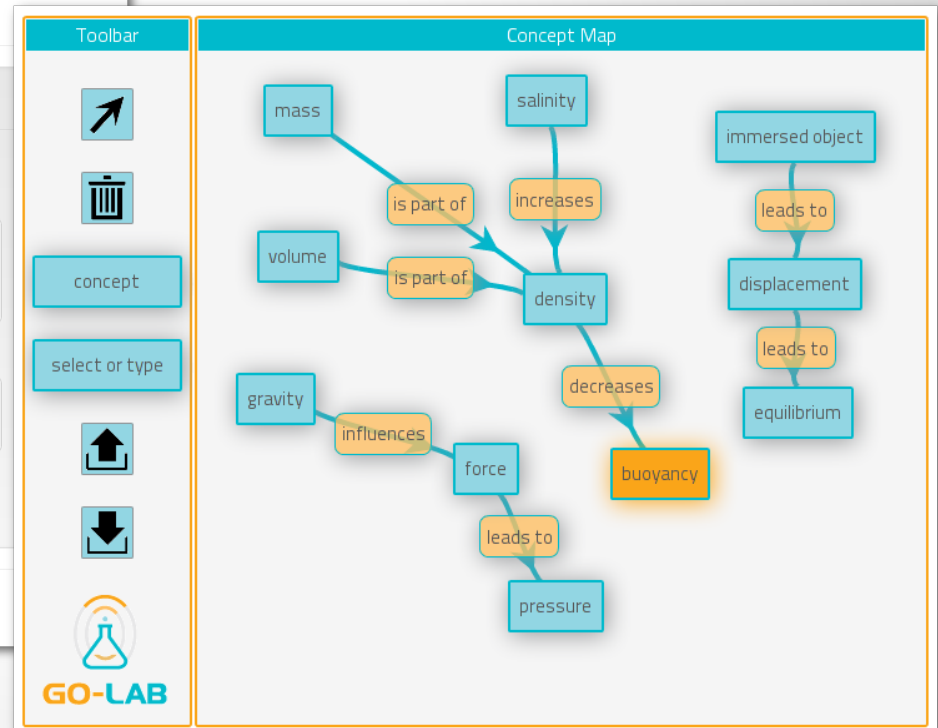
mass x fluid x density x volume x weight x immersed object x
pressure x force x gravity x acceleration x Archimedes' principle x
displacement x equilibrium x x Type the concept and hit enter or tab

List of Relations:

is a x is part of x has x leads to x influences x increases x
decreases x Type the relation and hit enter or tab

< Go back to adaptor index Save

AppComposer, the Go-Lab application creator for teachers.



Customization of apps (proof of concept with UT tools)

WORKFLOW: 5 STEPS

1 Select one of the app templates in the store or edit an existing app



2 Give a name and description to your app



3 Customize your app: add/remove variables

4 Preview your changes



5 Copy & paste the app address in your space

ACTUAL EFFORT SPENT TO DATE

App Composer			Flask	
Type	Count	Complexity	Count	Complexity
Files	56	66	77	89
Classes	47	49	67	70
Methods	140	243	478	762
Functions	123	345	122	256
Total	366	703	744	1177

	Max
Translator	23
Concept map editor	3
Hypothesis tool	6
Experiment design tool	43

DISSEMINATION TO DATE

D5.2. Specifications of the Go-Lab portal and app composer - initial (M12) *(approved by EU commission)*

http://www.go-lab-project.eu/sites/default/files/files/deliverable/file/Go-Lab_D5.2.pdf

EDUCON 2014 *(accepted for publication)*

A review of webapp authoring tools for e-learning

M. Latorre, A. Robles-Gómez, L. Rodríguez, P. Orduña, E. San Cristóbal, A. C. Caminero, Ll. Tobarra, I. Lequerica, S. Ros, R. Hernández, M. Castro, D. Lopez-de-Ipiña, J. García-Zubia

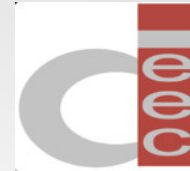
ICALT *(pending of approval)*

OpenSocial Application Builder and Customizer for School Teachers

Luis Rodriguez-Gil, Miguel Latorre, Pablo Orduña, Antonio Robles-Gómez, Elio Sancristobal, Sten Govaerts, Irene Lequerica, Agustin C. Caminero, Roberto Hernández, Salvador Ros, Manuel Castro, Diego López-de-Ipiña, Javier Garcia-Zubia



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