D5.4.2

Implementation plan for building of ecosystem - 2nd version – August 2015

ABSTRACT

This document describes each FI-CONTENT2 Specific Enabler (SE) that will be available for use by phase 3 projects.
For each enabler it describes what it does, how it can be used, in what format it is available for use, and what the terms and conditions are for its use.

This document is a deliverable of the FI-CONTENT2 integrated project supported by the European Commission under its FP7 research funding programme, and contributes to the FI-PPP (Future Internet Public Private Partnership) initiative.

DISCLAIMER

DELIVERABLE DETAILS

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EXECUTIVE SUMMARY

This document describes each FI-CONTENT2 Specific Enabler (SE) that will be available for use by phase 3 projects. For each enabler it describes what it does, how it can be used, in what format it is available for use, and what the terms and conditions are for its use.

This information forms the basis of a concrete plan for integrating FI-CONTENT2 outputs with phase 3 projects. It enables proposers and new joiners to clearly see the foundation work that has been completed so far upon which new platforms and services can be built.

The terms and conditions are presented in a simple and consistent format with a summary of each so phase 3 projects can make a quick assessment of the suitability of an SE before the need to analyse the detail of the licensing requirement.

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ABBREVIATIONS

API	Application programming interface
AR	Augmented reality
ARD	Arbeitsgemeinschaft der öffentlich-rechtlichen Rundfunkanstalten der Bundesrepublik Deutschland (consortium of public broadcasters in Germany)
CMS	Content management system
EPG	Electronic program guide
IoT	Internet of Things
MIT	Massachusetts Institute of Technology
NER	Named-entity recognition
NLP	Natural language processing
NLV	Non-linear video
OCDB	Open City Database
P2P	Peer to peer
PPP	Public-private partnership
RaaS	Recommendation as a Service
S2C	Server to client
SE	Specific enabler
SRT	SubRip Subtitle format
SSF	Second Screen Framework
TAL	TV Application Layer
UGC	User-generated content
VOD	Video on demand
WAR	Web application ARchive file format
TTS	Text To Speech

1 - INTRODUCTION

This document follows a template format where information for each FI-CONTENT2 specific enabler (SE) is provided in a consistent manner including the full terms and conditions of use. For each SE the following information is included:

- Owner/developer (name of company)
- What it does (plain text description)
- How it works (plain text description)
- What you get (high-level summary and plain text description)
  - Delivery model
  - Languages used
- Examples of use (e.g. where it is being used or how it could be used)
- Terms and conditions of use (high-level summary and plain text description)
  - Licence type
  - Licence features
  - Licence fee
  - Licence summary
  - Copyright statement
  - Full licence – where the full licence can be found
- Performance requirements (e.g. the number of users that can be supported and the specification of machines required to run the code)
- Further documentation (linking to project pages where relevant)
- Contact information

2 - SUMMARY INFORMATION ABOUT ALL SEs

This section of the document summarises the key elements and licensing arrangements of each specific enabler.

The aim is to enable any developer to make a quick assessment of whether a particular SE is worth investigating before they spend time exploring the detail of the licensing arrangements.

Note in some cases more than one delivery mode, licence, type of use or licence fee option is available in which cases there is a choice as to which can be used.

The table includes the following abbreviations:

Delivery mode
Android = Android library
Hosted = hosted services
SaaS = Software as a Service
Server = Server software
Source = source code available
Unity = Unity 3D package
WAR = Web application ARchive file

Licence type
Eval = can only be used for evaluation purposes
Open = Open source
Prop = Proprietary

Type of use
Com = commercial use available (see full entry for further details)

Licence fee
Per = Per use payment
Recurring = Recurring payment
Upfront = Upfront payment

2.1 - Social Connected TV Platform

2.1.1 - Enablers provided and supported for Phase 3

Name of SE	Delivery model	Licence type	Type of use	Licence fee	Free in FI-PPP
Second Screen Framework	Hosted	Eval Prop	Com	Free in FI-PPP	Yes
Content Enrichment	Hosted	Eval	Com	Per Recurring Upfront	Yes
Audio Mining	Hosted	Eval Prop	Com	Recurring Upfront	Yes
Content Optimisation	Hosted SaaS	Eval Prop	Com	Recurring Upfront	Yes
TV Application Layer	Source	Open	Com	Free	Yes
HBBTV Application Toolkit	Hosted	Eval Prop	Com	Free for subset, Per.	Yes

2.1.2 - Enablers not supported for Phase 3

Name of SE	Delivery model	Licence type	Type of use	Licence fee	Free in FI-PPP
Audio Fingerprinting	Hosted	Eval Prop	Com	Recurring Upfront	Yes
Content Atmosphere Search & Discovery	Hosted	Eval Prop	Com	Per Recurring Upfront	Yes
Content Similarity Search & Discovery	Hosted	Eval Prop	Com	Per Recurring Upfront	Yes

2.2 - Smart City Services Platform

2.2.1 - Enablers provided and supported for Phase 3

Name of SE	Delivery model	Licence type	Type of use	Licence fee	Free in FI-PPP
Social Network	Source	Open	Com	Free	Yes
Open City Database	Hosted Source	Open Prop	Com	Free	Yes

Fusion Engine	Hosted Source	Open	Com	Free	Yes
Context Aware Recommendation	Hosted Source	Open	Com	Free Per	Yes
OpenDataSoft	Hosted	Prop	Com	Recurring	Yes
App Generator	SaaS	Prop	Com	Per Recurring	Yes
POIProxy	Hosted Source	Open	Com	Free	Yes
3D-Map Tiles	Source	Open	Com	Free	Yes

2.2.2 - Enablers not supported for Phase 3

Name of SE	Delivery model	Licence type	Type of use	Licence fee	Free in FI-PPP
Reperio (Recommendation Services)	WAR	Eval Prop	Com	Recurring Upfront	Yes
KIWANO (Virtual Mixed Reality)	Hosted Source	Eval Open Prop	Com	Per Recurring Upfront	Yes
Content Sharing	Android Server	Eval Prop	Com	Free in FI-PPP	Yes
Recommendation as a Service	Hosted	Eval Prop	Com	Per Recurring Upfront	Yes

2.3 - Pervasive Games Platform

2.3.1 - Enablers provided and supported for Phase 3

Name of SE	Delivery model	Licence type	Type of use	Licence fee	Free in FI-PPP
Leaderboard	Source	Open	Com	Free	Yes
Reality Mixer – Camera Artefact Rendering	Source Unity	Open	Com	Free	Yes
Reality Mixer – Reflection Mapping	Source Unity	Open	Com	Free	Yes
Reality Mixer – Augmented Audio	Source	Open	Com	Free	Yes
Augmented Reality – Fast Feature Tracking	Source	Open	Com	Free	Yes
Game Synchronization	Source	Open	Com	Free	Yes
Geospatial – POI Interface	Source	Open	Com	Free	Yes
ARTool	SaaS	Prop	Com	Free	Yes
SLAMFlex	Source	Open	Com	Free	Yes
FA-TTS	Saas, Source, Unity	Open	Com	Free	Yes

Unusual Database-Event Detection	Source	Open	Com	Free	Yes

2.3.2 - Enablers not supported for Phase 3

Name of SE	**Delivery model**	**Licence type**	**Type of use**	**Licence fee**
Visual Agent Design	Source	Open	Com	Free
Geospatial POI Matchmaking	Source	Open	Com	Free
Networked Virtual Character	Source	Open	Com	Free
Augmented reality - Marker Tracking	Source	Open	Com	Free

3 - DETAILED INFORMATION FOR EACH SE

3.1 - Social Connected TV Platform

3.1.1 - IRT: Second Screen Framework

Second Screen Framework

Owner/developer

IRT

What it does

The Second Screen Framework (SSF) provides web applications that are running on a TV with all the crucial functionalities to establish a persistent bi-directional communication path to a web application running in the browser of any second screen device.

This includes the possibility to launch applications on the second screen from the TV . All functionality is provided via a slim JavaScript API and can thus be easily integrated into any web application.

Since the solution is fully compliant with the HbbTV standard, it enables content providers to create fully interactive applications with direct programme relation potentially targeting millions of already deployed devices on the market. Thus, the concept can be implemented without modifications to hardware and only requires minimal extensions to existing applications.

How it works

The SSF provides the following features to applications:

- Discovery
- Connection
- App-to-app communication
- App launch

Communication between a TV application and its companion application on the second screen is handled by a web server. Discovery between the devices is accomplished by means of a QR code (other methods possible). Both devices get a unique identifier from the framework server. The IDs are stored in cookies in the devices' browsers. The ID pairs are stored in a database on the framework server. Thus the connection between the devices is persistent. Users need to execute the discovery process only once. The framework is hosted as a service and is independent from the application that is making use of it. End users can benefit from their device connections in every service that supports the framework, without having to manage application-specific connection settings or the need to pair and connect again.

Since the app-to-app communication is done over the open internet, there are no specific requirements regarding the network configuration to be implemented by the end-user (e.g. the devices do not need to be in the same local network). The only requirements regarding the technical set-up of the end-users devices are that both devices need an internet connection and that they have a JavaScript-enabled web browser installed.

Second Screen Framework

What you get

Delivery model

- Hosted service yes
- Source code no

Languages used

- JavaScript yes
- PHP no

Description

- JavaScript library and API
- Full duplex communication between web applications running in the browser of connected HbbTV devices and second screen devices
- Mechanism for device discovery based on QR code
- Persistent device connection – devices, once coupled, remain associated
- Automatic launch of applications on the second screen device
- Based on standardised web technology

Examples of use

The SSF can be used to create a seamless TV second-screen experience without the hassle for the user to install a separate application for each individual TV show, application or broadcaster. The application developer does not need to care about different technologies for connecting devices nor on how to synchronise the screen contents because the SSF provides the persistent communication link through a slim API. Broadcasters and developers can easily create a consistent application that makes use of the TV screen and the personal device – potentially combining it with live TV content. Examples include video portals with easier navigation, provision of additional programme-related content on the personal device or TV-based games.

The SSF prototype has been integrated as a proof-of-concept in four existing HbbTV services from the ARD network: ARD Electronic Programme Guide (EPG), ARD Mediathek (Catch-up TV portal), ARD Text and rbbtext (both TV information portals). The ARD EPG offers the second screen functionality in a large scale public trial to its viewers. The EPG application is signalled in free-to-air broadcast on all channels of the ARD network over DVB-C, DVB-S and DVB-T.

Terms and conditions of use

Licence type

- Open source no
- Proprietary yes
- Evaluation licence yes (to 31 Dec 2016,

Licence features

Second Screen Framework

- Commercial use — no (evaluation licence); commercial licence is under development[1]
-
- Modifications allowed — no
- Distribution allowed — no
- Include copyright — must
- Include original — not applicable (no source code distribution)
- State changes — must
- Disclose source code — not required

Licence fee

Evaluation licence: Free-of-charge for use in FI-PPP programme. In addition: Available to external third-parties on case-by-case basis.

Licence summary

Under the licence, the Second Screen Framework must only be used for testing purposes and must not be used for commercial services. The framework and its API must not be made available to third parties. The copyright holder IRT cannot grant warranty on the framework under the free testing license. By using the framework you agree to the full terms and conditions.

Copyright statement

Full licence

http://mediafi.org/?portfolio=second-screen-framework#tab-terms-conditions

Performance requirements

There are no specific performance requirements for developers/application providers to consider regarding the use of SSF. An instance of SSF is maintained by IRT and hosted on the FI-WARE Testbed for use within FI-PPP. In order to make use of second screen functionalities enabled by SSF, the end-users devices require a stable internet connection and must have a JavaScript-enabled browser. The current implementation of the SSF (available under the evaluation licence) can only support a limited number of concurrent active users.

Further documentation

http://mediafi.org/?portfolio=second-screen-framework#tab-documentation

[1]Commercial licence: The SSF is planned to be marketed under the brand “First Connect” by T-Systems (a 100% subsidiary company of Deutsche Telekom AG) as a licenced partner of IRT. Pricing as well as terms and conditions of this commercial licence will be determined by T-Systems.

Second Screen Framework

Contact information

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3.1.2 - *Fraunhofer FOKUS: Content Enrichment*

Content Enrichment

Owner/developer

Fraunhofer FOKUS

What it does

Content Enrichment provides functions to create, distribute and play interactive video content across platforms and devices by making objects in the video clickable for their viewers. It also provides interfaces to incorporate Web 2.0 capabilities and community functionalities. Thus, the enabler acts as a common building block in future video and multimedia infrastructures. It allows seamless, platform-independent and convenient enrichment of any type of video content using any type of device for a plurality of application cases. Such use cases cover user-generated content (UGC), professional content, advertising and edutainment.

Content Enrichment provides the following capabilities:

- Media/Text Annotation
  - Allows any type of media content (e.g. video, audio, photo or text) to be enriched with user-generated video content
  - Add/edit comments, notes, enrich the media content with custom drawings or create custom mash-ups of media content
  - Enable the retrieval of related information (e.g. via access to external resources, location and content sensitive metadata, object tracking etc)
- Object-based Media Discovery
  - Enriched media content contains metadata information on available objects within the media
  - Referenced information on available objects can be used to discover other object-related media content
- Cross-Video Navigation
  - Allows user interaction to jump back and forth between video content

How it works

Use of Content Enrichment brings clickable video to Smart TVs, Mobiles, Tablets and PCs by adding a metadata layer to any kind of video content. An entirely web-based (HTML5) interactive video authoring tool provides the interface to tag video content, add object related information and link with related media. The metadata is handled through an API for both creation of interactive content as well as usage of interactive content in apps and services. Metadata related to a video is signalled out of band in parallel to video content and can be requested through the Use of Content Enrichment API.

What you get

Delivery model

- Hosted service yes

Content Enrichment

- Source code no

Languages used

- JavaScript yes
- PHP yes
- JSON yes

Description

Use of Content Enrichment is a hosted solution to create interactive video content consisting of a PHP and mySQL based backend. Interactive content can be created through an HTML5 based tagging tool that uses Java Script and communicates with the RESTful API via JSON to create and store metadata. Interactive video players can be implemented in HTML supporting the JSON player API.

Examples of use

- Use of Content Enrichment is used for development of interactive video apps within FI-CONTENT and by Fraunhofer FOKUS http://cenr.fokus.fraunhofer.de/play/
- http://cenr.fokus.fraunhofer.de/edit/
-

Terms and conditions of use

Licence type

- Open source no
- Proprietary subject to agreement
- Evaluation licence yes (30 days)

Licence features

- Commercial use yes
- Modifications allowed yes (via own custom players)
- Distribution allowed yes
- Include copyright must
- Include original not required
- State changes not required
- Disclose source code not required

Licence fee

-
- Content Enrichment technology is commercially available via Fraunhofer FOKUS spinoff company BitTubes GmbH. If you are interested in licensing NLV please contact hello@bittubes.com

Starter package includes	5.000€ per month flat fee

Content Enrichment

• <500.000 player requests • 1TB storage • 10TB traffic	
Each additional 1GB storage	1€
Each additional 1GB traffic	0,25€

Licence summary

Use of Content Enrichment is based on Fraunhofer FOKUS background technology to support non-linear-video (NLV). All project partners can use it during the term of the FI-PPP projects for testing and experimentation. For any other use (e.g. commercial use) please contact us.

Copyright statement

Full licence

Full licence may be provided on request and needs to be negotiated on a case-by-case basis.

Performance requirements

Content Enrichment provides an API that enables interactive content on a variety of platforms and devices such as PC, mobile, tablet and especially SmartTV and hybrid TVs. Any up-to-date browser is able to implement and integrate with Content Enrichment through Javascript and JSON. The hosted service is able to serve up to 1,000 users if the raw video content is streamed from a different source (e.g. Object Storage GE instance which could be linked with Content Enrichment).

Further documentation

- specification: http://wiki.mediafi.org/doku.php/ficontent.common.enabler.contentenrichment
- api: swagger/api-view.html?json=http://fic2.github.io/swaggerfiles/contentenrichment/swagger.json
- devguide: https://github.com/fraunhoferfokus/fic2-cenr#content-enrichment-se-api-specification
- installguide: https://github.com/fraunhoferfokus/fic2-cenr/blob/master/README.md

Contact information

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3.1.3 - Fraunhofer IAIS: Audio Mining

Audio Mining

Owner/developer

Fraunhofer Institute for Intelligent Analysis and Information Systems (IAIS)

What it does

Audio Mining analyses a German or English-language audio/video file (e.g. content from a TV news show) and returns textual information suitable for indexing (e.g. for search engines). Audio Mining performs speech and speaker segmentation as well as speech recognition in order to render speech into text. The SE delivers segments, speaker identification, characteristic keywords and additional metadata in XML and JSON. Finally, the SE builds an index for multimedia search. How it works

Audio Mining incorporates state-of-the-art multimedia pattern recognition algorithms such as speech detection, speaker diarisation, speaker recognition and speech recognition. By cascading these algorithms, it automatically obtains a broad spectrum of metadata for media files. This enables users to search for terms, quotations or specific speakers, browse through archives using content-based recommendation or obtain media information such as keywords or SRT-compatible subtitles. Audio Mining incorporates a powerful Apache Solr search engine that stores all metadata and makes it available via the provided SOAP/REST interface.

What you get

Delivery model

- Hosted service — yes (already deployed for FI-WARE Cloud)
- Source code — no

Languages used

- C/C++ — yes
- Java — yes

Description

Audio Mining offers a RESTful API which can be used to turn audio/visual content (either English or German) into machine readable text, using automatic speech recognition (ASR), and to recommend matching content for video clips. Via the API, the technology can, for example, be integrated into a CMS. The programming languages used within the SE are C/C++ and Java. The hosted service can be run on Fraunhofer infrastructure or on FI-WARE Cloud infrastructure where it has been deployed already.

Examples of use

- FI-CONTENT Audio Mining demo: http://fi-content.iais.fraunhofer.de/fc/audiomining/
- Could be used for indexing multimedia archives of TV broadcasters

Audio Mining

Terms and conditions of use

Licence type

- Open source no
- Proprietary yes
- Evaluation licence yes

Licence features

- Commercial use Yes
- Modifications allowed no
- Distribution allowed no
- Include copyright negotiable
- Include original not required
- State changes not required
- Disclose source code must

Licence fee

- Within Phase 3 of the FI-PPP: Free of charge running on FI-Ware infrastructure
- After Phase 3 of the FI-PPP: Volume-based upfront payment; “Volume” is defined as the total amount of hours of video content one wants to process; The following pricing model is based on the assumption that a) FI-Ware infrastructure (computing time and storage capacity) is used to run the Specific Enabler free of charge and b) the service is used “as it is” and has been deployed on the FI-Ware Cloud

Hours	Price per Hour
1-99 Hours	95 Euro / Hour
100-299 Hours	89 Euro / Hour
300-599 Hours	85 Euro / Hour
600-999 Hours	80 Euro / Hour
1.000+ Hours	78 Euro / Hour

Prices do not include VAT

Licence summary

Audio Mining can be used free of charge within phase 3 of the FI-PPP as described above. It offers functionality through APIs and has been built using several programming languages. It cannot be provided as open source.

Copyright statement

Audio Mining has been generated by Fraunhofer Institute for Intelligent Analysis and Information Systems IAIS, all copyrights are owned by Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e.V., Hansastraße 27c, 80686 Munich, Germany.

Full licence

http://fi-content.iais.fraunhofer.de/fc/audiomining/#/terms

Audio Mining

Performance requirements

- Audio Mining runs on Windows-based and Unix-based 32-bit & 64-bit machines (Unix recommended)
- Minimum requirement is a dual-core machine with at least 4GB RAM (Quad-core with 8GB recommended)
- One instance in the recommended setup can process approximately 32 hours of speech data per day
- The search engine's performance depends highly on the use case. Here typical Solr distribution strategies can be applied

Further documentation

- http://wiki.mediafi.org/doku.php/ficontent.socialtv.enabler.audiomining
- http://fi-content.iais.fraunhofer.de/fc/audiomining/

Contact information

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3.1.4 - *Fraunhofer IAIS: Content Optimisation*

Content Optimisation

Owner/developer

Fraunhofer Institute for Intelligent Analysis and Information Systems (IAIS)

What it does

Content Optimisation processes incoming textual content (e.g. from the Audio Mining SE) and extracts characteristic keywords. Subsequently, semantic enrichment based on natural language processing (NLP) is performed to connect the transcripts and keywords with additional, contextual information. The SE integrates and harmonises additional content from disperse sources. The software is intended for SMEs that want to build second screen applications (e.g. for TV documentaries), but can also be used for various other purposes.

How it works

Content Optimisation leverages technologies for named entity recognition and spotting of entities in textual content. To accomplish this goal it uses normed data that is available as open sources (e.g. DBPedia.org) to recognise people, organisations and/or locations in the provided textual data. Those entities will be used to annotate the data and to build up a search index. The latter enables the user to experience an intuitive search with state of the art searching technologies such as a faceted search approach. The search and retrieval of enriched content is accessible via a RESTful API, which enables the user to easily integrate the service into its architecture and/or frameworks.

What you get

Delivery model

- Hosted service — yes (already deployed for FI-WARE Cloud)
- Source code — no

Languages used

- Java — yes
- Scala — yes

Description

Content Optimisation offers a RESTful API that can be used to enrich textual content in English and German language with information from open sources like DBPedia.org, using named-entity recognition (NER) and spotting technologies, and to provide a retrieval interface with state-of-the-art search technologies like facetted search and auto-completion. Via the API, the technology can, for example, be integrated into a CMS. The programming languages used within the SE are Java and Scala. The hosted service can be run on Fraunhofer infrastructure or on FI-WARE Cloud infrastructure where it has been deployed already.

Content Optimisation

Examples of use

- Demo: http://fi-content.iais.fraunhofer.de/fc/contentoptimisation
- Modified version used as backend software for the German digital library demonstrating search capabilities: http://www.ddb.de

Terms and conditions of use

Licence type

- Open source no
- Proprietary yes
- Evaluation licence yes

Licence features

- Commercial use Yes
- Modifications allowed no
- Distribution allowed no
- Include copyright negotiable
- Include original not required
- State changes not required
- Disclose source code must

Licence fee

- Within Phase 3 of the FI-PPP: Free of charge running on FI-Ware infrastructure
- After Phase 3 of the FI-PPP: Volume-based upfront payment; "Volume" is defined as the total amount of objects one wants to process; The following pricing model is based on the assumption that a) FI-Ware infrastructure (computing time and storage capacity) is used to run the Specific Enabler free of charge and b) the service is used "as it is" and has been deployed on the FI-Ware Cloud

Objects	Price per Object
1-1.999 Objects	0,8 Euro / Object
2.000-4.999 Objects	0,7 Euro / Object
5.000-9.999 Objects	0,5 Euro / Object
10.000-19.999 Objects	0,4 Euro / Object
20.000+ Objects	0,3 Euro / Object

Prices do not include VAT

Licence summary

Content Optimisation can be used free of charge within phase 3 of the FI-PPP as described above. It offers functionalities through APIs and has been built using several programming languages. It cannot be provided as open source.

Content Optimisation

Performance requirements

- Indexing/analysis of new objects is a hardware intensive task and should only be utilized by up to 2 parallel users at once on the currently available FI-WARE computing instances (2 cores + 4GB RAM)
- Querying of the analysed information and retrieval of the annotated content is dependent on the used GE's. While using the SE stand-alone it can handle up to 50 parallel requests at once on the currently available FI-Ware computing instances (2 cores + 4GB RAM)
- The minimum hardware requirement is 2 cores + 4GB Ram + 10GB HDD (sufficient for up to 500.000 unique objects/documents)

Further documentation

- FI-CONTENT wiki: http://wiki.mediafi.org/doku.php/ficontent.socialtv.enabler.contentoptimisation
- SE's website: http://fi-content.iais.fraunhofer.de/fc/contentoptimisation/

Contact information

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3.1.5 - *BBC: TV Application Layer*

TV Application Layer

Owner/developer

BBC

What it does

The TV Application Layer (TAL) is a software layer for developing Connected TV applications. There are hundreds of devices in the marketplace and they all use slightly different technologies to achieve similar results. The purpose of the TAL is to allow you to write an application once and be confident that it can be deployed to all HTML-based TVs. The TAL provides abstractions for varying device capabilities and interfaces including media playback, remote control input, animation, networking and persistent storage. It also provides a set of user interface controls with widget interaction, navigation and input focus management.

How it works

The TAL software layer abstracts the differences between various Connected TV, set-top box, and games console implementations, giving TV application authors a consistent API to develop against. The bulk of your development can be done on a desktop browser that is built on the same origins as the TV browsers. It does not mean there will not be things that work differently once you run your application on TV devices, but it does mean that you can focus on building the features you want in your app rather than worrying about the specifics of TV devices in great detail.

What you get

Delivery model

- Source code yes

Languages used

- JavaScript yes
- PHP yes

Description

TAL is an open source JavaScript library, with a PHP (or Node.js) server-side component. The framework is organised as a set of JavaScript modules based on the Require library and a modified version of require.js 0.15 is supplied. You include the JavaScript library in the web page for your Connected TV application. The server-side component detects which browser is used and delivers a device-specific configuration file that adapts the TAL to the capabilities of that particular device.

Examples of use

- TAL is the framework used for development of the BBC iPlayer across all devices
  - www.bbc.co.uk/iplayer
- An example application is included in the code repository along with associated tutorial pages

- https://github.com/fmtvp/talexample
- http://fmtvp.github.io/tal/getting-started/tutorial.html

- Other notable community projects include The Doctor on TAL and a code fork to provide node.js support
  - https://github.com/GaryHigham/thedoctorontal
  - https://github.com/landeiro/tal

Terms and conditions of use

Licence type

- Open source yes
- Proprietary subject to agreement
- Evaluation licence no

Licence features

- Commercial use yes
- Modifications allowed yes
- Distribution allowed yes
- Include copyright must
- Include original not required
- State changes not required
- Disclose source code not required

Licence fee

- Free

Licence summary

TAL is available and free to use to all under the terms of the Apache 2.0 open source licence.

Copyright statement

Copyright © 2013 British Broadcasting Corporation and TAL Contributors

Full licence

https://github.com/fmtvp/tal/blob/master/LICENSE-2.0

Performance requirements

The front-end components of TAL will work in all modern browsers on both PCs and set top boxes. The server side component requires a basic web server running PHP5. The web server has minimal work so can be specified according to the page demands of your specific Connected TV application. TAL will work on Samsung devices (2010 onwards), Panasonic (2011 onwards), Sony (2011 onwards), Toshiba (2011 onwards), LG (2012 onwards) and a whole range of other devices. For a full list of current devices view the config folder in the code repository: https://github.com/fmtvp/tal/tree/master/config/devices

TV Application Layer

Further documentation

http://mediafi.org/?portfolio=tv-application-layer#tab-documentation

Contact information

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3.1.6 - Fraunhofer FOKUS: HbbTV Application Toolkit

HbbTV Application Toolkit

Owner/developer

Fraunhofer FOKUS

What it does

Due to the lack of tools for content creators and developers, developing HbbTV applications can be demanding, time-consuming and expensive. The HbbTV Application Toolkit SE provides a powerful tool set enabling broadcasters, program editors and TV app developers to quickly and easily create HbbTV-compliant TV apps.

How it works

HAT provides a CMS with a set of GUI templates, populated with content via an easy-to-use HTML5-based user interface. A REST-API to the content model of the HbbTV App Toolkit SE's CMS allows its integration into a content creator's established production environment. In addition, the HbbTV App Toolkit SE supports HbbTV developers by providing a library with solutions for recurrent tasks, e.g. navigation through a button list, scrollable elements, channel change, etc.

What you get

Delivery model

- Hosted service yes
- Source code no

Languages used

- JavaScript yes
- PHP yes
- JSON yes

The CMS front end is browser-based. It can be used with any current mobile or desktop browser. The CMS content model can be accessed via a REST-API.

Description

The HbbTV standard provides a powerful set of APIs for the creation of programme-related interactive TV applications. However, there are only few applications available today that address the full potential of HbbTV. The existing applications are rather static TV-tailored websites, e.g. VoD portals or news and weather apps. While these kinds of applications offer a clear service and are used by viewers they do not have a real contextual relation to a running TV show nor do they exhaust the possibilities of viewer engagement in and with the current TV show.

HbbTV Application Toolkit

The main reason for this is that the development of HbbTV applications is still quite demanding due to the lack of proper tools for content creators and developers. Creating an HbbTV application just for one single show is simply too expensive.

The HbbTV App Toolkit SE enables fast and easy creation of programme-related HbbTV applications. It provides a CMS with a set of GUI templates that can be filled with content via an easy-to-use user interface. A REST-API to the content model of the HbbTV App Toolkit SE's CMS allows its integration into the CMS used by content creators in their production environment. In addition to the CMS the HbbTV App Toolkit SE supports HbbTV developers by providing a library with solutions for recurrent tasks, e.g. navigation through a button list, scrollable elements, channel change, etc.

Moreover the HbbTV App Toolkit facilitates the integration of features provided by other Social Connected TV Platform enablers, such as the Second-Screen Framework SE and the Content Enrichment SE, into HbbTV applications. The development of the SE will not open a new field of research within FIcontent. The approach is rather to harvest the insights gained during the development of the FIcontent trial applications and to allow other developers and content creators to profit from these findings.

Examples of use

- Creation of program related HbbTV application

Terms and conditions of use

Licence type

- Open source no
- Proprietary subject to agreement
- Evaluation licence yes

Licence features

- Commercial use yes
- Modifications allowed yes
- Distribution allowed yes
- Include copyright must
- Include original not required
- State changes not required
- Disclose source code not required

Licence fee

- Free use of authoring environment to create HbbTV applications with specified subset of components. Additional selected premium features are provided free-of-charge for non-commercial use under the FIWARE programme. Further components might be released in the future and tailored extensions can be provided on a case-by-case basis.

HbbTV Application Toolkit

Licence summary

Use of HbbTV application authoring tool: free-of-charge and "as is". Basic set of features: Provided free-of-charge without limitations. Additional selected premium features: Provided free-of-charge for non-commercial evaluation under FIWARE Customised extension: Agreement on case-by-case basis.

Copyright statement

Full licence

http://hat.fokus.fraunhofer.de:8080/license/license.txt

Performance requirements

HAT comes as a SaaS solution that is intended to be used by program editors and app designs. It can handle multiple HbbTV Apps through his CMS. Playout of Apps is limited to one App per User. For 24/7 service created apps should be deployed on a CDN infrastructure.

Further documentation

- specification: http://wiki.mediafi.org/doku.php/ficontent.socialtv.enabler.hbbtvapplicationtoolkit
- api: swagger/api-view.html?json=http://fic2.github.io/swaggerfiles/hbbtvapplicationtoolkit/swagger.json
- devguide: https://github.com/fraunhoferfokus/fic2-hat#hbbtv-application-toolkit-se-specification
- installguide: https://github.com/fraunhoferfokus/fic2-hat/blob/master/README.md

Contact information

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3.1.7 - Fraunhofer IAIS: Audio Fingerprinting

The development of the Audio Fingerprinting SE, which was part of previous platform releases, has been discontinued following the recommendation of the commission.

3.1.8 - Technicolor: Content Atmosphere Search & Discovery

The development of the Content Atmosphere SE, which was part of previous platform releases, has been discontinued following the recommendation of the commission.

3.1.9 - Technicolor: Content Similarity Search & Discovery

The development of the Content Similarity Search and Discovery SE, which was part of previous platform releases, has been discontinued following the recommendation of the commission.

3.2 - Smart City Services Platform

3.2.1 - Pixelpark: Social Network

Social Network

Owner/developer

Pixelpark

What it does

The Social Network SE is middleware that can be used to create a social network, either temporarily or permanently for a group of users. It is able to provide social interactions in the digital world separate from the major, proprietary social networks (e.g. Facebook) and as such is best suited for intranet-based or extranet-based networking. Users of the Social Network SE keep full control over their data.

How it works

The Social Network SE comprises two parts: a server and a client component. The server component is a web application that creates the authentication layer towards an external authentication component (e.g. the Keyrock Identity Management Generic Enabler) and serves the web pages. Additionally, a noSQL CouchDB database is used to provide a data exchange with the clients. The client is aimed towards mobile devices that can either be a mobile web browser of the latest generation or an Android App. The Android App serves the specific use case of providing offline functionality in environments with unreliable internet access (e.g. public mass events).

What you get

Delivery model

- Hosted service no
- Source code yes

Languages used

- JavaScript yes
- PHP no

Description

Both the client and server side components are written in Javascript. The client side component makes use of the AngularJS framework. A PouchDB module provides data replication towards the server sided CouchDB. A Node.js server is used to provide the authentication for the web client that runs in a standard browser. The app is created using the PhoneGap mobile framework that outputs a native mobile application embedding the web pages in a shell.

Examples of use

- The Social Network SE was used in tests with pupils from a Cologne school
- The same group will use it in the Carnival experiment in Cologne

Social Network

Terms and conditions of use

Licence type

- Open source yes
- Proprietary no
- Evaluation licence no

Licence features

- Commercial use yes
- Modifications allowed yes
- Distribution allowed yes
- Include copyright must
- Include original negotiable
- State changes not required
- Disclose source code not required

Licence fee

- Free

Licence summary

The Social Network SE is available under the MIT open source licence. As such it can be used in commercial projects if the copyright is maintained. It is available free of charge.

Copyright statement

Full licence

The MIT License (MIT)

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Social Network

Performance requirements

The server side runs on an equivalent of an Amazon m1.medium virtual machine and was tested with 20 users. We expect it to support up to 1.000 users. The client side runs on every smart phone browser that comprises the Chromium engine, version 30 or higher as a web application. The client application needs Android version 4.4.2 ('KitKat') and was tested on a Nexus 5 smartphone.

Further documentation

- http://mediafi.org/?portfolio=social-network-enabler#tab-documentation
- https://github.com/pixelpark/ppnet/blob/master/README.md

Contact information

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3.2.2 - Fraunhofer FOKUS: Open City Database

Open City Database

Owner/developer

Fraunhofer FOKUS

What it does

The Open City Database (OCDB) is an open source database for any smart city related data (e.g. points of interest, open data from cities and related media from various sources). Besides its database functionality the OCDB provides a comprehensive API to create, modify and request data sets for their integration with smart city guide apps or any other application or service that may take advantage of open data from cities.

How it works

The OCDB is designed to build the backend basis for cross platform apps (e.g. mobile web apps) that make use of open tourist and open city data. Applications can access the OCDB data using the REST endpoint. The data format used by OCDB and exposed through the API is JSON. Even user-generated content (UGC) through bespoke apps as well as further open data (e.g. DBpedia) can be managed by the OCDB.

What you get

Delivery model

- Hosted service yes
- Source code yes

Languages used

- JavaScript yes
- JSON yes

Description

The OCDB is an open source solution with meteor framework server side component. The OCDB can be used as hosted service or a new instance can be installed. It provides a comprehensive API to create, modify and request open city data. Furthermore, it allows for the integration of UGC through bespoke applications

Examples of use

- FIC2 Smart City Guide Reference implementation http://scg.fokus.fraunhofer.de:3000
- http://scg.fokus.fraunhofer.de:3000/http://wiki.mediafi.org/doku.php/ficontent.smartcity.enabler.opencitydatabase
- https://github.com/fraunhoferfokus/OCDB

Open City Database

Terms and conditions of use

Licence type

- Open source yes
- Proprietary subject to agreement
- Evaluation licence no

Licence features

- Commercial use yes
- Modifications allowed yes
- Distribution allowed yes
- Include copyright must
- Include original not required
- State changes not required
- Disclose source code not required

Licence fee

- Free

Licence summary

OCDB is available and free to use to all under the terms of the Apache 2.0 open source licence.

Copyright statement

Full licence

http://www.apache.org/licenses/LICENSE-2.0

Further documentation

- http://wiki.mediafi.org/doku.php/ficontent.smartcity.enabler.opencitydatabase
- https://github.com/fraunhoferfokus/OCDB

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3.2.3 - UPVLC: Fusion Engine

Fusion Engine

Owner/developer

Universitat Politecnica de Valencia (UPVLC)

What it does

The FE SE has two parts: (i) a FrontEnd (web) service, where the admin can build and manage OCDs, and (ii) the Fusion Service, a backend service that performs the fusion based on given inputs in the FrontEnd service. The administrator can build as many OCDs as he/she wants.

The Fusion Service basically takes as input an XML file and populates a geospatial database with POIs. The input XML declares the fusion rules that are to be applied for a specific OCD. The database used is POSTGIS thus it allows geospatial searches afterwards. After the fusion, a normal user can make geospatial queries in order to retrieve POIs. This inquiry service is incorporated within the Tomcat Frontend Service. Currently both the CitySDK and FIWARE POI interface are supported.

How it works

The FE is an offline (backend) process that takes as input an XML file and populates a geospatial database with POIs. The input XML declares the fusion rules that are to be applied for a specific OCD. The database used is POSTGIS thus it allows geospatial searches afterwards. After the fusion, a normal user can make geospatial queries in order to retrieve POIs. This inquiry service is a Tomcat frontend service. Currently only the CitySDK interface is available, though new connectors are envisioned (common WP3 POI API)

What you get

Delivery model

- Hosted service yes
- Source code yes
- Download package yes

Languages used

- JavaScript yes
- JSON/XML yes
- Java yes

Description

The Fusion Engine SE can be easily built using Ant and deployed on a Java application server (Tomcat). The configuration is basically set up by means of a fusion rules XML indicating city, categories, input sources and priorities. The Fusion Service is a backend service for administrators (there is no mobile app) but provides an interface to access the built OCD database.

Fusion Engine

Examples of use

- Used in Tenerife (November 2014)
- Used for the Valencia demo (March 2015)

Terms and conditions of use

Licence type

- Open source yes
- Proprietary no
- Evaluation licence no

Licence features

- Commercial use yes
- Modifications allowed yes
- Distribution allowed yes
- Include copyright required
- Include original not required
- State changes required
- Disclose source code not required

Licence fee

- Free

Licence summary

The Fusion Engine SE is available and free to use under the terms of the Apache 2.0 open source license.

Copyright statement

Full licence

Fusion Engine

Performance requirements

- Integration of own connectors/interfaces as new modules written in Java is possible
- Standard version can serve up to 50 users simultaneously on a normal computer (Intel i3,4GB RAM), for larger customer bases the server requirements (RAM, CPU, HD read speed) needs to scale up

Further documentation

All the documentation is publicly accessible at the Fusion Engine Github repository (https://github.com/satrd/poi_fusion_engine).
Further documentation is provided on the project wiki and on github.

Contact information

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3.2.4 - La Citadelle Inzenjering : Context Aware Recommendation

Context Aware Recommendation

Owner/developer

La Citadelle Inzenjering

What it does

This Specific Enabler provides context and activity based POI and action recommendation for smart city guide – like services and applications. The SE consists of two server modules:

- The Activity and Context Recognition server module which uses gathered contextual and sensory data for classification of user activity and context.
- The Recommendation Matrix Preparation server module.

Additionally, demo Android application is provided for collecting contextual/sensory data and presenting POI recommendation results.

How it works

The SE provides the following functions:

- Contextual data analysis and activity recognition.
- Recommendation matrix adaptation.
- REST APIs for interconnecting with contextual data sources, POI repositories/providers and mobile applications.

Contextual data on which the activity/context recognition relies include: geolocation, data from built-in sensors, WiFi network SSIDs. Recognized end user activity is used for providing activity/context aware POI recommendation.

What you get

Delivery model

- Hosted service yes
- Source code yes
- Download package yes

Languages used

- JavaScript yes
- JSON yes
- Java yes
- Python yes

Description

Mobile application module is implemented with Cordova framework. Activity and Context Recognition and Recommendation Matrix preparation modules use Python Django framework. Modules communicate over REST APIs and can be used as standalone server modules.

Context Aware Recommendation

Examples of use

- Used for context aware POI recommendation and voucher offerings to passengers of GO Airport Express transportation service provider in Chicago.
- Used for realization of the smart city guide application providing activity and context aware action and POI recommendation.
- POI recommendation based on current spatial and temporal context and collaborative filtering is provided in the mobile application developed for the Valencia Fallas 2015 event.

Terms and conditions of use

Licence type

- Open source yes
- Proprietary no
- Evaluation licence no

Licence features

- Commercial use yes
- Modifications allowed yes
- Distribution allowed yes
- Include copyright required
- Include original not required
- State changes not required
- Disclose source code required

Licence fee

- Free when used with external (client's) servers and cloud infrastructure/platforms not operated by LCI.
- Pay per use when used in connection with the VizLore contextual data analytics cloud platform.

Licence summary

Context Aware Recommendation SE 1.0 is open source software and is licensed under the GPL License version 1.3 or any later version.
Use of open source software in connection with the VizLore contextual data analytics cloud platform is subject to Google Cloud Terms of Service https://developers.google.com/cloud/terms/
Pay per use model pricing relative to amount of cloud resource consumed (instance hours, network traffic, data storage)

Copyright statement

Full licence

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Context Aware Recommendation

description. Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an -AS IS- BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the License for the specific language governing permissions and limitations under the License.
These Terms and conditions are designed to protect both Context Aware Recommendation and its users.

Performance requirements

- Android: Generated apps can work on any version of Android, depending on their source code.
- Mobile applications communicate with the server modules through REST APIs and defined JSON messages.
- Server side modules are implemented with Python Django framework.

Further documentation

Further documentation can be accessed on the project wiki page:
http://wiki.mediafi.org/doku.php/ficontent.smartcity.enabler.contextawarerecommendation

Contact information

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3.2.5 - *OpenDataSoft: Data Management (ODS SE)*

OpenDataSoft: Data Management (ODS SE)

Owner/developer

OpenDataSoft

What it does

The ODS SE has been specifically designed for non-technical business users to share, publish and reuse structured data. To both create interactive data visualizations and feed external applications with data through a rich set of REST APIs.

How it works

With a SaaS model, the OpenDataSoft SE provides both simple user interfaces as well as advanced data visualizations and APIs to unleash the real power of data. It can be used by non-technical users through a simple point and click user interface. Users can simply upload data files or connect the platform with external sources. Once the data has been ingested by the platform, it is made available through interactive data visualizations as well as powerful REST APIs.

What you get

Delivery model

- Hosted service yes
- Source code no

Description

As a partner of the FI-PPP program or as a SME who want to leverage the resources provided by the FIcontent project, you have different ways to use the ODS specific enabler. You can directly use the FIcontent data portal, which gathers some prepared datasets, which can directly be reused. You can also request an access to your own data portal during the experimentation phase.

Examples of use

- Open Data portal of the City of Bruxelles: http://opendata.brussels.be/.
- Open Data portal of the City of Paris: http://opendata.paris.fr/
- Open Data portal of the Greater Paris: http://data.iledefrance.fr/explore/
- Open Data, Higher Education in France: http://data.enseignementsup-recherche.gouv.fr/

OpenDataSoft: Data Management (ODS SE)

Terms and conditions of use

Licence type

- Open source no
- Proprietary yes
- Evaluation licence yes

Licence features

- Commercial use yes
- Modifications allowed no
- Distribution allowed no
- Include copyright required
- Include original not required
- State changes not required
- Disclose source code not required

Licence fee

- Free during phase 3

Licence summary

The OpenDataSoft enabler is made available as Software as a Service. Free of usage during phase 3 and then subject to subscriptions as described here: http://www.opendatasoft.com/.

Copyright statement

Full licence

http://www.opendatasoft.com/

Further documentation

- http://docs.opendatasoft.com

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3.2.6 - *eBusiness Information: App Generator*

App Generator SE

Owner/developer

eBusiness Information

What it does

The App Generator SE is a set of services able to dynamically generate mobile apps (android, iOS, Cordova) and webapps with custom content (name, features, icons, data…).
The designmyapp.mobi portal has been created to allow non-technical users to use the SE. Any mobile app can potentially become a template. The SE already proposes several templates such as CityGuide, SocialNetwork, Agenda, Team runner, FIC2 WP3 catalog.
Beyond that, a developer portal has been created allowing any third party developer to design their own templates, and test the generation process on a dedicated instance of the SE on the cloud.

How it works

The best way to understand the generation process is to describe its use through the DesignMyApp portal. A user lands on the DesignMyApp website.
Step 1: He chooses an App to make (understand Template).
Step 2: Once the app chosen, he arrives on a tile grid view of all the options he might use in his app (customization, data, assets …). Some of these options might just be true/false options, or may be configured more thoroughly (with file upload features etc…). Any option can be associated with a pricing.
Step 2.5: Once the options chosen and configured, he checks out.
Step 3: The App is built by the App Generator SE (Android, or iOS, or both).
Step 4: When payment is done, he will be available to download his app and install it on any device.

What you get

Delivery model

- Hosted service Yes
- Source code Yes (SDK source code, sample code of templates)

Description

Third parties can develop and integrate their own templates into the App Generator SE (Android, iOS, Cordova, webapps).
Using the SDK, they will be able to implement their own business logic and pricing. They are able to use dedicated restful APIs to pilot the generation process from any third party website.

Examples of use

- DesignMyApp web portal: anyone can create his own app using the App Generator. *https://designmyapp.mobi*

App Generator SE

- Barathon app : This Barathon App in Munich was generated with the AppGenerator SE through the DesignMyApp portal
  https://www.youtube.com/watch?v=7PZB_53xFRM
- Adam is an application generated with the App Generator SE for the company m2o, working with the Veolia energy group. It uses crowdsourced opendata from ODS SE to display the noise level of your city at different points.
  Android version : (city of Lyon) :
  https://play.google.com/store/apps/details?id=mobi.designmyapp.m2o.lyon&hl=fr
  iOS version (city of Saint-Amand-Montrond)
  https://itunes.apple.com/us/app/samson/id969542551?l=fr&ls=1&mt=8
- Offer dedicated to festivals built with the AppGenerator:
  http://eventri.be

Terms and conditions of use

Licence type

- Open source no
- Proprietary yes
- Evaluation licence no

Licence features

- Commercial use yes
- Modifications allowed no
- Distribution allowed no
- Include copyright required
- Include original not required
- State changes not required
- Disclose source code not required

Licence fee

- Free during phase 3

Licence summary

App Generator SE provides Users with two kinds of services. The first being the infrastructure and ability to generate mobile Apps over the internet via its Website or APIs. The second being the generated App itself.
Our basic Service is completely free from registration or charge. Special non-free features are available, such as specific options within the templates.
Use of the Website and the APIs will be free for Phase 3 (FIWARE accelerator projects).

The App Generator enabler is made available as Software as a Service. Free of usage during phase 3 and then subject to subscriptions as described here:
http://www.designmyapp.mobi

App Generator SE

Further documentation

- Concept: http://concept.designmyapp.mobi
- Developer knowledge base: http://developer.designmyapp.mobi/#/knowledge-base

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3.2.7 - *Prodevelop - POIProxy*

POIProxy

Owner/developer

Prodevelop

What it does

The POIProxy SE is a service to retrieve Points of Interest from almost any public remote service that exposes geolocated data through a REST API or static files.

Some examples of the kind of services that POIProxy can interact with:

- Open data portals: Static files with different formats (CSV, JSON, XML), OData APIs, REST APIs (CKAN, Socrata…)
- Social networks: Flickr, Panoramio, Instagram, Twitter, Foursquare…
- Event services: LastFM, Nvivo, Meetup, Eventbrite…
- Other services: Wikilocation, Geonames, OpenWeatherMap, CityBikes…

How it works

POIProxy is a Java server application that can be configured via JSON files to define the request and response APIs of different POI services. It provides a single API to make requests to the POI services adapting the response to GeoJSON format.

What you get

Delivery model

- Hosted service yes
- Source code yes
- Download package yes

Languages used

- JavaScript yes
- Java yes
- JSON yes

Description

The POIProxy SE can be easily built using Maven and deployed on a Java application server such as Tomcat. POIProxy demo apps are multi-platform HTML5 and Javascript responsive apps. They don't make use of any specific native API so they can be built as Cordova apps and deployed on any app marketplace

Examples of use

POIProxy

1. *Photos around me: A multi-platform webapp that shows photos of services registered in POIProxy (Flickr, Panoramio, Picasa, Instagram…) to identify interesting places around your location. Source code available at: https://github.com/Prodevelop/POIProxy-Metro*
2. Points of interest around me: A multi-platform webapp that shows a map of points of interest of any service registered in POIProxy. Source code available at : https://github.com/Prodevelop/POIProxy-ol3
3. Eventtribe : Makes use of POIProxy to show a photo gallery of the Transmusicales festival 2014 . App available at : https://play.google.com/store/apps/details?id=mobi.designmyapp.eventribe.transmusicales2014

Licence type

- Open source yes
- Proprietary no
- Evaluation licence no

Licence features

- Commercial use yes
- Modifications allowed yes
- Distribution allowed yes
- Include copyright required
- Include original not required
- State changes required
- Disclose source code not required

Licence fee

Free

Licence summary

The POIProxy SE is available and free to use under the terms of the Apache 2.0 open source license

Copyright statement

Copyright © Prodevelop 2014

Full licence

POIProxy

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Performance requirements

No specific performance requirements are needed

Further documentation

http://wiki.mediafi.org/doku.php/ficontent.smartcity.enabler.poiproxy

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For technical information

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3.2.8 - *DFKI: 3DMapTiles*

3D Map Tiles

Owner/developer

DFKI

What it does

The 3D-Map Tiles SE supplies in an OpenStreetMap-like manner map tiles of the ground. These tiles are a 3D representation of the scene ground in contrast to usual image tiles of OSM. Moreover, the 3D-Map Tiles SE supports different backend data providers to offer different kinds of tiles, such as projected OSM-tiles and laser-scanned elevation data with textures. Therefore, the 3D-Map Tiles SE incorporates the GIS-DP GE from FIWARE.

How it works

The 3D-Map Tiles SE queries one of its backends for the given bounds of the requested map tile, retrieves and processes the data from the query result, and finally delivers the map tile as XML3D resource to the client application. Optionally, the resulting XML3D resource will be cached.

What you get
Delivery model

Hosted service: Yes
Source code: Yes
Download package: Yes

Languages used

JavaScript
PHP

Description

The implementation includes a PHP-based webservice that can be easily deployed on an Apache webserver.

Licence summary

The 3D-Map Tiles SE is available under MIT licensing
Licence type

- Open source: Yes
- Proprietary: No
- Evaluation licence: No

Licence features

- Commercial use: Yes

- Modifications allowed: Yes
- Distribution allowed: Yes
- Include copyright: Required
- Include original: Not required
- State changes: Not required
- Disclose source code: Not required

Licence fee

Free

Copyright statement

Full licence

Documentation

- Specification of the 3D-Map Tiles SE

Examples

- **Single tile**: This is one tile (containing the "Places" in Hamburg, Germany) provided by the 3D-Map Tiles SE using the Overpass API backend.
- **Oulu**: Small part of Oulu (Finland) using the GIS-DP GE for aerial imaging and building footprints.

Requirements

- mod_rewrite: The URL routing requires apache's module mod_rewrite to be enabled.

3D Map Tiles

- PHP5: The implementation requires PHP 5.4.
- Apache: The php-based implementation runs on an apache web server.

Download(s)

- https://github.com/stlemme/3d-map-tiles/archive/master.zip

Instance(s)
FI-PPP

- Endpoint: http://130.206.80.175/api/3d-map-tiles
- This instance is deployed to FIWARE testbed and can be accessed without any credentials.

Repository

- https://github.com/stlemme/3d-map-tiles
- git clone --recursive https://github.com/stlemme/3d-map-tiles.git

Owner/developer

DFKI GmbH

Contact person(s)

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3.2.9 - Orange – Reperio (Recommendation Services)

The development of Orange Reperio, which was part of previous platform releases, has been discontinued as the Orange has terminated its involvement in the project.

3.2.10 - Orange: KIWANO (Virtual Mixed Reality)

The development of the KIWANO SE, which was part of previous platform releases, has been discontinued as the Orange has terminated its involvement in the project.

3.2.11 - Thales Communications and Security: Content Sharing

The Content Sharing enabler will not been supported for phase3. Interested parties can contact Thales directly.

3.2.12 - Fraunhofer FOKUS: Recommendation as a Service

The Recommendation as a Service enabler will not be supported for Phase 3. Interested parties can contact Fokus directly.

3.3 - Games Platform

3.3.1 - ETHZ: Leaderboard

Leaderboard

Owner/developer

ETHZ

What it does

The main functionality that the Leaderboard SE provides, is the storage of high scores and the retrieval of a sorted list of high scores.

How it works

Leaderboard is a combination of services plugged together to provide the storage of high scores and the retrieval of a sorted list of high scores. As such it is a construction of open source software solutions with their respective documentation found elsewhere. It provides an API to the user. Leaderboard will make use of the 'Identity Management - KeyRock' GE (http://catalogue.fi-ware.org/enablers/identity-management-keyrock) to authenticate a user when submitting a score. The requests are a direct access to the database. Be aware that in this version, the high score value submitted by users can easily be manipulated or hacked.

What you get

Delivery model

- Hosted service no
- Source code yes

Languages used

- JavaScript yes
- PHP no
- Java yes
- HTML yes

Description

Leaderboard is a set of mySQL commands wrapped in Java. Both a standalone server and a plugin for Smartfoxserver2x are implemented. A simple HTML/JavaScript client example is also provided.

Examples of use

- Augmented Resistance game
  http://youtu.be/_C_8wRZsyDs
- Any other game using high scores

Leaderboard

Terms and conditions of use

Licence type

- Open source yes
- Proprietary no
- Evaluation licence no

Licence features

- Commercial use yes
- Modifications allowed yes
- Distribution allowed yes
- Include copyright must
- Include original not required
- State changes not required
- Disclose source code not required

Licence fee

- Free

Licence summary

The MIT License is a permissive free software license, meaning that it permits reuse within proprietary software provided all copies of the licensed software include a copy of the MIT License terms.

Copyright statement

Full licence

http://mediafi.org/?portfolio=leaderboard-se#tab-terms-conditions

Performance requirements

The current implementation just wraps mySQL commands and does not yet feature advanced caching strategies that would be required for thousands of users.

Further documentation

http://mediafi.org/?portfolio=leaderboard-se#tab-documentation

Contact information

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3.3.2 - *ETHZ: Reality Mixer – Camera Artefact Rendering*

Reality Mixer – Camera Artefact Rendering

Owner/developer

ETHZ

What it does

This client-side code modifies the virtual rendered content to match the camera image more closely in an AR context to provide more realistic appearance.

How it works

Motion blur, noise and colours are measured or estimated and applied to the virtually rendered image.

What you get

Delivery model

- Hosted service no
- Source code yes
- Unity package yes

Languages used

- JavaScript no
- PHP no
- C# yes
- GLSL yes

Description

The implementation is provided as a client-side Unity package that can simply be imported and used in a Unity project.

Examples of use

- Augmented Resistance
  http://youtu.be/_C_8wRZsyDs
- Any other AR application written in Unity

Terms and conditions of use

Licence type

- Open source yes
- Proprietary no
- Evaluation licence no

Reality Mixer – Camera Artefact Rendering

Licence features

- Commercial use yes
- Modifications allowed yes
- Distribution allowed yes
- Include copyright must
- Include original not required
- State changes not required
- Disclose source code not required

Licence fee

- Free

Licence summary

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Copyright statement

Full licence

http://mediafi.org/?portfolio=reality-mixer-camera-artefact-rendering-se#tab-terms-conditions

Performance requirements

Hardware accelerated OpenGL is required

Further documentation

http://mediafi.org/?portfolio=reality-mixer-camera-artefact-rendering-se#tab-documentation

Contact information

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3.3.3 - *ETHZ: Reality Mixer – Reflection Mapping*

Reality Mixer – Reflection Mapping

Owner/developer

BLRK, ETHZ, DFKI

What it does

All visually-oriented SEs of the Reality Mixer group measure camera properties and adapt the virtual objects to fit to the camera image background visually. The Reflection Mapping SE utilises a light probe to extract a sphere map from the camera image, which contains the environmental lighting conditions. This sphere map will be used to apply an appropriate lighting model to rendered virtual objects. Thus, the additional virtual objects are incorporated into the resulting image in a very seamless fashion leading to a more realistic experience of mixed reality applications.

How it works

It provides a new level of realistic augmented reality rendering with the following steps: it pinpoints the centre and radius of the material sphere source relative to the augmented reality marker. Then it assigns the camera image of the sphere to the source texturing of the target object(s) and performs spherical environment reflection mapping to the shading of the target object(s).

What you get

Delivery model

- Hosted service no
- Source code yes
- Unity package yes

Languages used

- JavaScript yes
- PHP no
- UnityScript yes

Description

The implementation includes either an Xflow node as JavaScript library or a cross platform Unity script/package.

Examples of use

- Augmented Resistance as part of the “Tabletop Augmented Reality Games” scenario http://wiki.mediafi.org/doku.php/ficontent.gaming.scenarios#tabletop_augmented_reality_games
- Star Tours as part of the “Seamless Augmented Reality on the Web” scenario http://wiki.mediafi.org/doku.php/ficontent.gaming.scenarios#seamless_augmented_reality_on_the_web

Reality Mixer – Reflection Mapping

Terms and conditions of use

Licence type

- Open source yes
- Proprietary no
- Evaluation licence no

Licence features

- Commercial use yes
- Modifications allowed yes
- Distribution allowed yes
- Include copyright must
- Include original not required
- State changes not required
- Disclose source code not required

Licence fee

- Free

Licence summary

The Reality Mixer – Reflection Mapping SE is available under MIT licensing

Copyright statement

Full licence

Template: http://opensource.org/licenses/MIT
Xflow: https://github.com/stlemme/xml3d-xflmix/blob/master/LICENSE
Unity: see enclosed license file in package

Performance requirements

- The Xflow implementation runs in any XML3D capable browser with WebGL support.
- All current maintained versions of Unity are supported by this SE. The latest Unity release at time of writing is v4.3.4.

Further documentation

- http://mediafi.org/?portfolio=reality-mixer-reflection-mapping-se
- http://wiki.mediafi.org/doku.php/ficontent.gaming.enabler.realitymixer.reflectionmapping

Reality Mixer – Reflection Mapping

Contact information

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3.3.4 - BLKR/ETHZ: Reality Mixer - Augmented Audio

Reality Mixer – Augmented Audio

Owner/developer

ETHZ and The Walt Disney Company

What it does

This aurally oriented enabler of the Reality Mixer group measure sensor location properties and adapt the virtual sound sources to the audio environment. The Augmented Audio enabler makes use of the POI interface enabler to provide correctly located spatial sounds. Thus, the addition of audio incorporated into the physical environment in a very seamless fashion leads to a more realistic sound experience for mixed reality applications.

How it works

The Augmented Audio enabler performs a bearing computation making use of the POI interface enabler sourced positional data, which provide the location of audio asset sources as well as the location of the device. These relative locations, combined with a compass sensor are used to calculate the directionality and distance of the given audio source to the user. Thus, providing a correct binaural spatial audio service, with virtual sounds realistically placed.

What you get

Delivery model

- Hosted service no
- Source code yes

Languages used

- JavaScript yes
- PHP no

Description

The implementation includes a Unity3D mobile script package.

Terms and conditions of use

Licence type

- Open source yes
- Proprietary no
- Evaluation licence no

Licence features

- Commercial use yes
- Modifications allowed yes
- Distribution allowed yes

Reality Mixer – Augmented Audio

- Include copyright must
- Include original not required
- State changes not required
- Disclose source code not required

Licence fee

- Free

Licence summary

The Reality Mixer – Augmented Audio enabler is available under MIT licensing

Copyright statement

Copyright © 2013 ETH Zurich

Full licence

Template: http://opensource.org/licenses/MIT

Further documentation

- Specification:

http://wiki.mediafi.org/doku.php/ficontent.gaming.enabler.realitymixer.augmentedaudio

- API description:

http://fi-content2-games-platform.github.io/FIcontent.Gaming.Enabler.RealityMixer.AugmentedAudio/html/annotated.html

- Developers guide:

http://wiki.mediafi.org/doku.php/ficontent.gaming.enabler.realitymixer.augmentedaudio.developerguide

- Installation guide:

http://wiki.mediafi.org/doku.php/ficontent.gaming.enabler.realitymixer.augmentedaudio#developer_guide

Contact information

Contact person(s)
For technical information:

- Prof. Kenny Mitchell
- The Walt Disney Company

Reality Mixer – Augmented Audio

For licensing information:

- Marcel Lancelle
- Eidgenössische Technische Hochschule Zürich

3.3.5 - *BLRK/ETHZ: Augmented Reality – Fast Feature Tracking*

Augmented Reality – Fast Feature Tracking

Owner/developer

BLRK/ETHZ

What it does

All specific enablers of the Augmented Reality (AR) group provide various tracking methods to enable AR applications. The Fast Feature Tracking SE learns targets by colour and then matches the centre of a colour area (for example a coloured football or road sign) in the camera image to retrieve the relative camera pose information. This extends an application with the capabilities to apply the matching transformation to 3D-scene content and render them onto respective targets.

How it works

With the Fast Feature Tracking SE you will be able to easily create applications with basic markerless augmented reality functionality. With this SE you can learn the colour of targets on the fly in an application and then track the centre and size of the target for camera relative placement of animated interactive graphics such as virtual characters or vehicles. It provides a markerless augmented reality tracking method (blob tracking) with the following steps:

- Pinpoint the centre and radius of the material sphere source relative to the Augmented Reality marker
- Assign the camera image of the sphere to the source texturing of the target object(s)
- Perform spherical environment reflection mapping to the shading of the target object(s)

Implementation is via a cross platform Unity script/package and reference algorithm provided in Skye Wars app source code.

Delivery model

- Hosted service no
- Source code yes
- iTunes App Store demo yes

Languages used

- JavaScript no
- PHP no
- C# yes
- C/C++ yes
- GLSL yes

Description

The implementation includes a Unity C# script (controlling GPU process and editor access) and a native plugin performing the fast tracking method. It is suitable for implementation in XFlow and delivery as a generic enabler.

Augmented Reality – Fast Feature Tracking

Examples of use

- Full source to the Skye Wars iTunes app is provided on GitHub https://github.com/fzuendeth/FIcontent.Gaming.Enabler.AugmentedReality.FastFeatureTracking
- https://itunes.apple.com/us/app/skye-wars/id672970985?ls=1&mt=8

Terms and conditions of use

Licence type

- Open source yes

Licence features

- Commercial use yes
- Modifications allowed yes
- Distribution allowed yes
- Include copyright must
- Include original not required
- State changes not required
- Disclose source code not required

Licence fee

- Free

Licence summary

The Augmented Reality – Fast Feature Tracking SE is provided under MIT license.

Copyright statement

Full licence

http://opensource.org/licenses/MIT

Augmented Reality – Fast Feature Tracking

Performance requirements

This SE runs on PC, fast Android device and is further highly optimized for Apple devices

Further documentation

- http://mediafi.org/?portfolio=augmented-reality-fast”-tracking-se
- http://wiki.mediafi.org/doku.php/ficontent.gaming.enabler.augmentedreality.fastfeaturetracking

Contact information

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3.3.6 - *DRZ: Game Synchronization*

Game Synchronization

Owner/developer

Disney Research Zurich

What it does

The Game Synchronization SE provides functionality to synchronise the game world using the RTS (Real-Time Strategy) Lockstep mechanism. Provides an efficient way to synchronize many objects by sending their actions instead of streaming their positions.

How it works

This enabler has to be integrated to the host application (the game) and deployed on the devices participating in the game. The enabler will deal with the synchronization, using Unity's meta server to find other players.

What you get

Delivery model

- Hosted service no
- Source code yes
- Specify others Unity package, SFS2X Extension

Languages used

- JavaScript no
- PHP no
- C# yes

Description

This enabler comes as C# library which is included into the game implementation. The current implementation uses the Unity networking layer. It can be easily extended to use a different layer.

Examples of use

- Augmented Resistance RTS
- Spider Demo

Game Synchronization

Terms and conditions of use

Licence type

- Open source yes
- Proprietary no
- Evaluation licence no

Licence features

- Commercial use yes
- Modifications allowed yes
- Distribution allowed yes
- Include copyright must
- Include original not required
- State changes not required
- Disclose source code not required

Licence fee

- Free

Licence summary

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Copyright statement

Full licence

http://mediafi.org/?portfolio=game-synchronization-se#tab-terms-conditions

Performance requirements

Game synchronisation requires adequate network performances (bandwidth and latency).

A crucial requirement of the RTS-Lockstep model is that the game simulation must be deterministic, i.e. the same inputs will always produce the same output on all devices you plan to support. If this requirement is not met, the simulations will diverge, leading to different states of the game on different clients. Recovering from such de-synchronization is often complicated. If your game cannot be simulated deterministically, consider changing to a different networking model.

Further documentation

- http://mediafi.org/?portfolio=game-synchronization-se#tab-documentation

Game Synchronization

- http://wiki.mediafi.org/doku.php/ficontent.gaming.enabler.gamesynchronization

Requirements

Unity3D: All current maintained versions of Unity are supported by this SE. The latest Unity release at time of writing is v4.3.4.

Download(s)

https://github.com/fi-content2-games-platform/FIcontent.Gaming.Enabler.GameSynchronization/archive/master.zip

Unity Asset store

This enabler is available on the official Unity Asset store at the following address:
https://www.assetstore.unity3d.com/en/#!/content/36628

Repository

https://github.com/fi-content2-games-platform/FIcontent.Gaming.Enabler.GameSynchronization

git clone --recursive https://github.com/fi-content2-games-platform/FIcontent.Gaming.Enabler.GameSynchronization.git

Owner/developer

ETH Zurich

Contact person(s)

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3.3.7 - *ETH: Geospatial – POI Interface*

Geospatial – POI Interface

What it does

The PoI Interface SE implements an interface to the POI Data Provider GE or or POI Storage SE APIs for Unity3d. It provides access to all the POI Data Provider GE methods and wraps the POI data structures into C# objects.

What you get

Delivery model

- Hosted service: No
- Source code: Yes
- Download package: Yes

Languages used

- C#
- UnityScript

Description

The implementation includes a cross platform Unity script/package but can run also in a standalone solution.

Licence summary

The Geospatial – POI Interface SE is available under MIT licensing

Licence type

- Open source: Yes
- Proprietary: No
- Evaluation licence: No

Licence features

- Commercial use: Yes
- Modifications allowed: Yes
- Distribution allowed: Yes
- Include copyright: Required
- Include original: Not required
- State changes: Not required
- Disclose source code: Not required

Licence fee

Free

Copyright statement

Geospatial – POI Interface

Documentation

Specification of the Geospatial – POI Interface SE

Examples

Gnome Trader: City-wide game about trading resources. It uses the newspaper boxes around the city as portals to the Gnome trading world!

Requirements

Unity3D: All current maintained versions of Unity are supported by this SE. The latest Unity release at time of writing is v4.3.4.

Download(s)

https://github.com/fi-content2-games-platform/FIcontent.Gaming.Enabler.PoIInterface/archive/master.zip

Unity Asset store

This enabler is available on the official Unity Asset store at the following address: https://www.assetstore.unity3d.com/en/#!/content/36630

Geospatial – POI Interface

Repository

https://github.com/fi-content2-games-platform/FIcontent.Gaming.Enabler.PoIInterface

git clone --recursive https://github.com/fi-content2-games-platform/FIcontent.Gaming.Enabler.PoIInterface.git.

Owner/developer

ETH Zurich

Contact person(s)

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3.3.8 - *DNET: ARTool*

ARTool

Owner/developer

DunavNET

What it does

ARTool SE is a cloud tool that enables a simple and fast creation of AR applications for smart phones and PC requiring no programming knowledge.

How it works

ARTool platform is designed to enable an easy creation of AR applications using a user friendly design platform (ARTool Creator) as well as the deployment of these applications through the deployment platform (ARTool Deploy). Genie Creator is basically a web application which enables an easy template based design and creation of AR applications using GUI. Templates define the AR application through use of configuration components such as:

- number of screens
- type of AR marker (GEO or image)
- position and features of displayed AR content (e.g. interaction between 3D models)
- user interaction components (e.g buttons, icons, image based interactive elements)
- use of third party services (e.g. in-app payment, weather forecast, IoT platforms, social networks)
- integration of sensor based services

Designed applications can be exported and used on iOS, Android, Windows and Mac platforms. Genie Creator platform is designed as SaaS where users can register and get an access to available functionalities based on the type of the monthly subscription. Developed application can be classified as either private or public through a generic Genie Deploy application and the corresponding Genie Deploy platform. Applications can also be classified as “stand-alone” and placed on a specific market.

What you get

Delivery model

- Cloud service (SaaS) yes
- Source code no

Languages used

- JavaScript Yes
- PHP no
- C#.NET yes

Description

The SE is provided as SaaS and PaaS to be used in conjunction with the smartphone applications available for Android and iOS platforms.

ARTool

Examples of use

ARTool SE will have a dedicated front-end web site available for the developers that will include the associated tutorials on how to utilise this component.

Terms and conditions of use

Licence type

- Open source No
- Proprietary Yes
- Evaluation licence no

Licence features

- Commercial use yes
- Modifications allowed yes
- Distribution allowed yes (mobile applications created)
- Include copyright yes
- Include original not required
- State changes not required
- Disclose source code not required

Licence fee

- Free within FI-PPP, commercial terms apply outside of FI-PPP

Licence summary

Terms and conditions for the software associated to the ARTool Specific Enabler enable free use within the FI-PPP phase 2 and phase 3. Commercial use of ARTool SE, outside of FI-PPP will require a commercial licence.

Performance requirements

The ARTool SE is a SaaS and PaaS oriented architecture and hence requires PC or tablet with browser. The applications (or presentations) created can be run on smartphone with installed ARTool application available.

Further documentation

http://wiki.mediafi.org/doku.php/ficontent:gaming:enabler:artool

Contact information

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3.3.9 - *DNET: SLAMflex*

SLAMflex

Owner/developer

DunavNET

What it does

SLAMflex provides detection and tracking of dominant planes for smartphone devices. This plane can then be used to show AR content relative to the plane orientation.

How it works

SLAMflex is based on the PTAM algorithm[2] but optimised to run more efficiently. It is based on the following Simultaneous Localisation and Mapping (SLAM) procedure:

- Corner point detection in one key frame
- Corner point detection in another key frame
- From these corners, 3d points are calculated determining initial plane
- Plane tracking using SSD for linear motion
- Smartphone gyroscope used for rotational movements

What you get

Delivery model

- Hosted service no
- Source code yes

Languages used

- C/C++ yes
- PHP no
- C# yes

Description

The SE is provided as source code and implemented as Unity3D plug-in for Android and iOS platforms.

Examples of use

The SLAMflex SE comes with an example use, written in Unity3D. This is included in the GitHub repository.

Terms and conditions of use

Licence type

- Open source yes

[2] http://www.robots.ox.ac.uk/~gk/PTAM/

SLAMflex

- Proprietary no
- Evaluation licence no

Licence features

- Commercial use yes
- Modifications allowed yes
- Distribution allowed yes
- Include copyright must
- Include original not required
- State changes not required
- Disclose source code not required

Licence fee

- Free

Licence summary

SLAMFlex is released under the GPLv3 license. Under that license it is possible to use, change, redistribute, for commercial or non-commercial purposes. The original copyright and permission notice must be included with the source code. No other warranty or any kind is provided with the software.

Performance requirements

The SE is run within the smartphone (iOS and Android) application created within Unity3D engine. At least dual-core CPU on the smartphone is needed to enable good performance.

Further documentation

http://wiki.mediafi.org/doku.php/ficontent:gaming:enabler:slamflex

Contact information

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3.3.10 - *Mivoq: FA-TTS*

FA-TTS

Owner/developer

Mivoq S.R.L.

What it does

The main functionality of FA-TTS (Flexible and Adaptive Text To Speech Synthesis) is to provide online Text To Speech services that can be used to generate speech from text in an expressive and creative way.

How it works

The terms "Flexible" and "Adaptive" within the FA-TTS SE have the following meanings: Flexibility means the possibility of manipulating some acoustic and linguistic parameters in order to obtain the synthetic voice that is most suitable for a specific situation; Adaptivity means the possibility of adapting a generic Text To Speech (TTS) voice, this feature will be used when the online voice personalization building procedure will be ready.
To achieve this result, MIVOQ will make use of Statistical Parametric Speech Synthesis and Speaker Adaptation technologies.
FA-TTS is designed as a Saas. FA-TTS is developed using the open source software MARYTTS, with the addition of some additional features and providing all the scripts necessary to make possible the installation as enabler.
The user can use a tool to install the synthetic voices in several languages.

What you get

Delivery model

- Hosted service no
- Source code yes
- Unity plugin yes

Languages used

- Java yes
- C# yes

Description

FA-TTS is based upon the Open Source MARY TTS Server written in Java and it has been modified by MIVOQ in order to provide a more general API. The implementation also includes a Unity C# script that uses this API.

Examples of use

- Treasure Hunt (work in progress)

FA-TTS

Terms and conditions of use

Licence type

- Open source yes
- Proprietary no
- Evaluation licence no

Licence features

- Commercial use yes
- Modifications allowed yes
- Distribution allowed yes
- Include copyright must
- Include original required
- State changes required
- Disclose source code required

Licence fee

- Free

Licence summary

FA-TTS contains modules that are released under two different licenses:

- The LGPL License is a permissive free software license that permits use of the library in proprietary programs. The license requires that only the LGPL software-parts be modifiable by end-users via source code availability.
- The "Attribution-NoDerivatives" license CC BY-ND. This license permits to copy and redistribute the material in any medium or format. It forbids the distribution of derivative works.

FA-TTS is made up by the following components:

- MARYTTS server: The MARY TTS Server is licensed under the LGPL terms.
- MIVOQ Italian Module contains some data distributed with CC BY-ND license.

Copyright statement

FA-TTS is made up by the following components:

- MARYTTS server: The MARY TTS Server is property of the MARY TTS development team. Copyright © 2000-2015 DFKI GmbH.
- MIVOQ Italian Modules: They are property of MIVOQ S.R.L. and MARY TTS development team. Copyright © 2000-2015 DFKI GmbH and Copyright © 2013-2015 MIVOQ S.R.L.

Full licence

https://www.gnu.org/licenses/lgpl.html

http://creativecommons.org/licenses/by-nd/4.0/

FA-TTS

Performance requirements

The current implementation of the server is designed to respond to concurrent multiple requests. The number of parallel threads managed by the server is a configuration parameters, but the latency of the system depends on hardware performance and the number of available cores in particular.

Further documentation

Not available yet.

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3.3.11 - *ETHZ: Unusual Database – Event Detection*

Unusual Database – Event Detection

Owner/developer

ETHZ

What it does

The main functionality that the Unusual Database-Event Detection SE provides is a monitoring service of a database. It regularly checks database values. If any value is out of an expected range, an email alert is sent.

How it works

The monitoring is done by the regular execution of database queries to check if the database is available and the values are within an expected range. If this is not the case, an email is sent to the administrator.

What you get

The Unusual Database-Event Detection SE runs on a server and is written in Java. It monitors a mySQL database and sends alerts via emails. It may have an additional JSON interface in the future.

Delivery model

- Hosted service no
- Source code yes

Languages used

- JavaScript yes
- PHP no
- Java yes
- HTML yes

Examples of use

- Augmented Resistance game
  http://youtu.be/_C_8wRZsyDs
- Any other game using high scores

Terms and conditions of use

Licence type

- Open source yes
- Proprietary no
- Evaluation licence no

Licence features

- Commercial use yes

Unusual Database – Event Detection

- Modifications allowed yes
- Distribution allowed yes
- Include copyright must
- Include original not required
- State changes not required
- Disclose source code not required

Licence fee

- Free

Licence summary

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Performance requirements

The current implementation just wraps mySQL commands and does not yet feature advanced caching strategies that would be required for thousands of users.

Further documentation

- Specification:

  http://wiki.mediafi.org/doku.php/ficontent.gaming.enabler.unusualdatabaseeventdetection

- api:

Unusual Database – Event Detection

http://fi-content2-games-platform.github.io/FIcontent.Gaming.Enabler.UnusualDatabaseEventDetection/doxygen/index.html

- Development guide:

http://wiki.mediafi.org/doku.php/ficontent.gaming.enabler.unusualdatabaseeventdetection.developerguide

- Installation guide:

https://github.com/fi-content2-games-platform/FIcontent.Gaming.Enabler.UnusualDatabaseEventDetection#installation-and-setup

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3.3.12 - DRW: Visual Agent Design

The consortium agrees with the reviewers (cf report of review n°3) that the Visual Agent Design SE is too specific to be showcased on FIC2Lab, and therefore DRZ decided to drop it to concentrate on the POI Interface and the Game Synchronization. Nevertheless, we will continue to support the Visual Agent Design on a peer-to-peer basis with the one SME and the research partners that adopted it.

3.3.13 - Gobo: Geospatial – POI Matchmaking

The Spatial Matchmaking enabler will not be supported for Phase 3. Interested parties can contact Gobo directly.

3.3.14 - DFKI: Networked virtual Character

The NVC SE was promoted towards FIWARE and is going to be integrated into an upcoming GEi of the Synchronization GE. We collaborate with the respective GE owner to make the contributions of this SE visible to a larger target group through FIWARE. Moreover, we dropped any activity regarding this SE in favor of focusing efforts towards FIC2Lab for other remaining SEs.

3.3.15 - Augmented Reality – Marker tracking

The Augmented Reality enabler was discontinued since the Augmented Reality GE is available and covers fiducial marker tracking.

4 - CONCLUSION

This document has described each FI-CONTENT2 Specific Enabler (SE) that will be available for use by phase 3 projects. It has described what each enabler does, how it can be used, in what format it is available for use, and the terms and conditions for its use.

This document is part of an ongoing process in which partners are working towards further releases. They will continue to update the information contained herein during the remainder of FI-CONTENT2 to ensure the licence terms are as consistent and favourable to phase 3 projects as is possible within the commercial constraints under which all partners must operate.

Important note: The consortium considers this is the last version of this document produced. The data in this document is superseded by the operational live and up to date information provided on the FIC2Lab portal – http://lab.mediafi.org.

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