

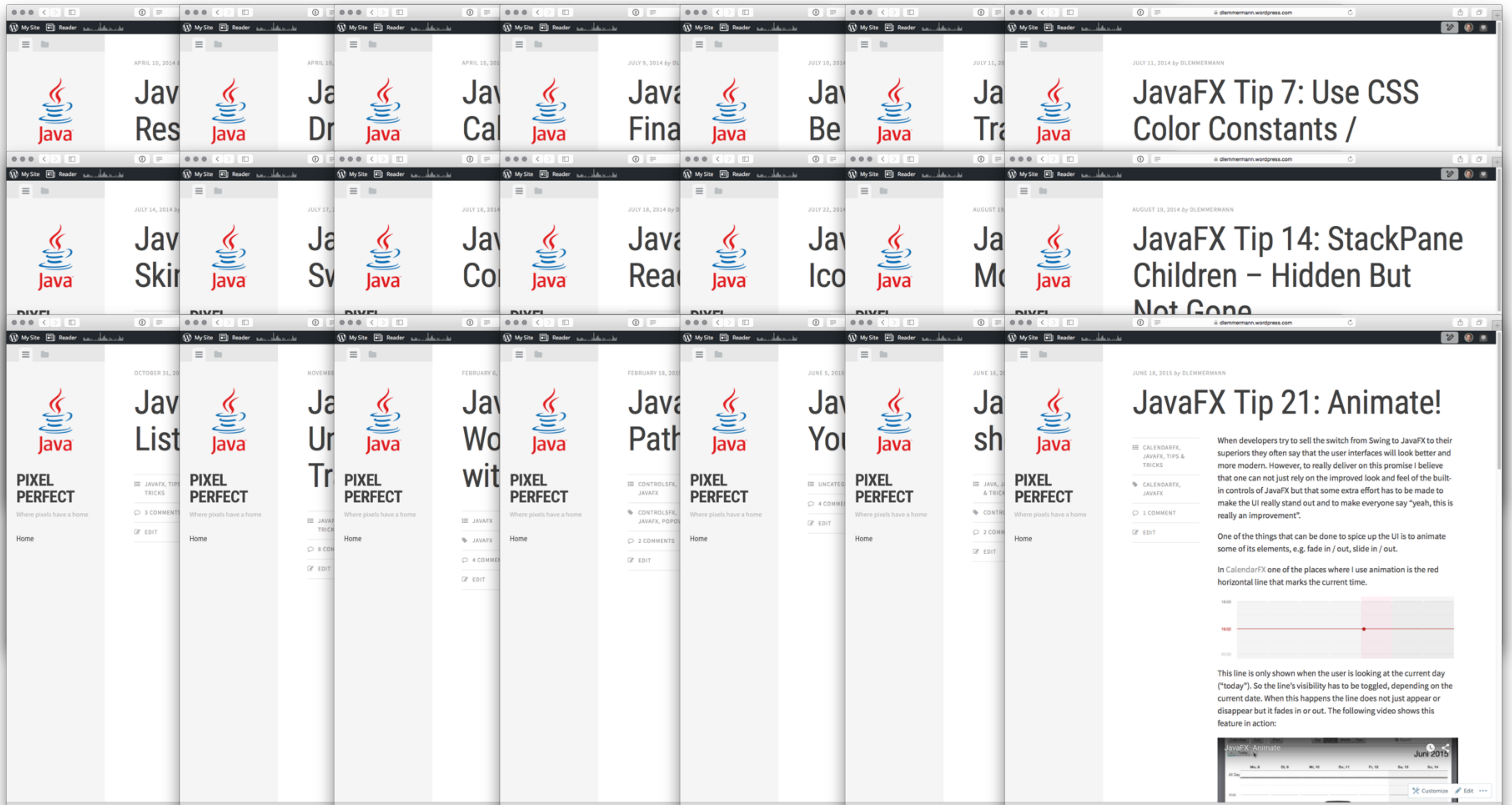


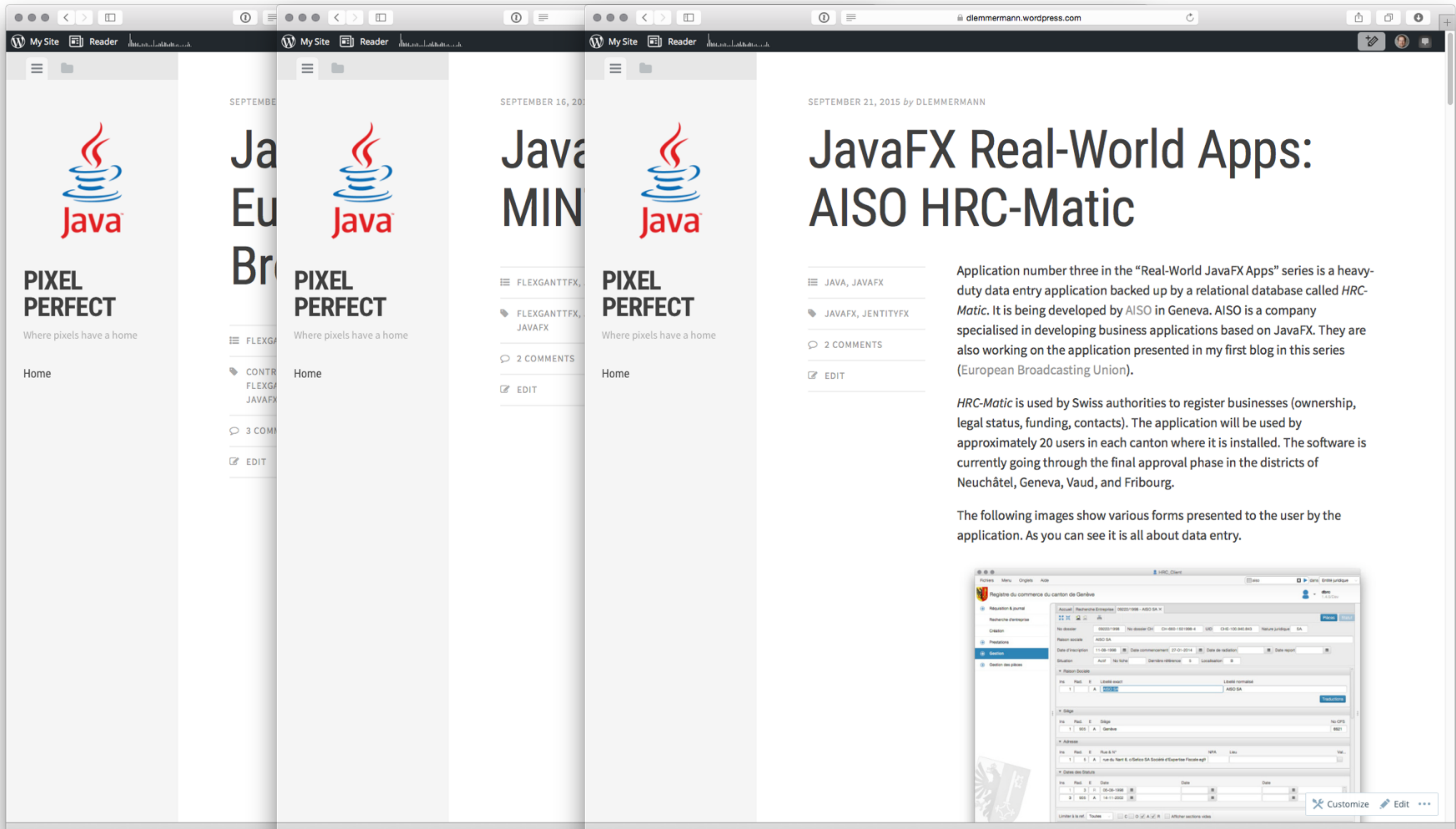
Real-World Apps

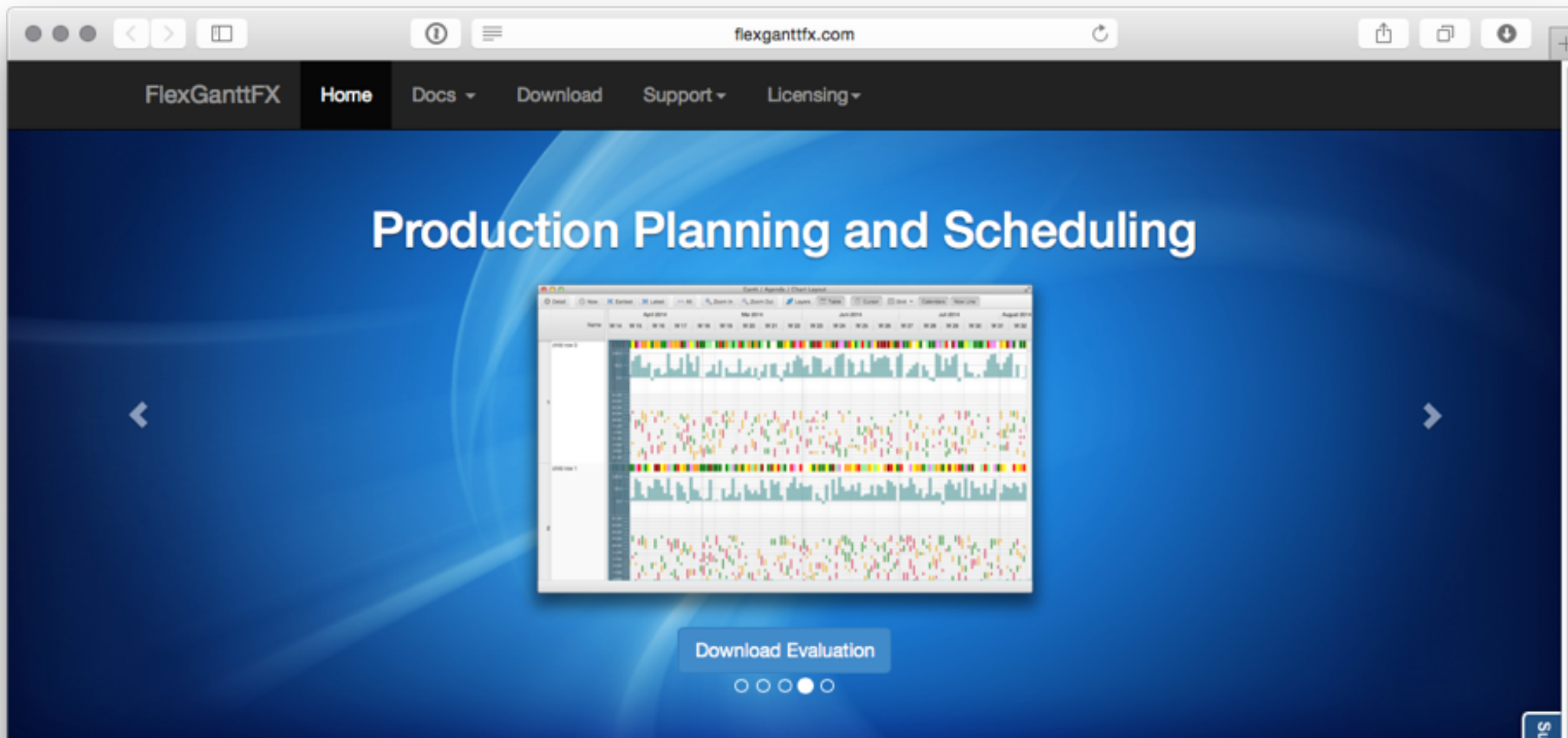
Dirk Lemmermann & Alexander Casall
JavaOne 2015, CON 3907

Dirk Lemmermann

- Java / JavaFX Freelancer in Zurich, Switzerland
- Framework Developer
- Previously: CMU Robotics Institute Pittsburgh, Skyva International Boston, Credit Suisse Zurich
- Twitter: @dlemmermann
- Blog: <http://dlemmermann.wordpress.com>







Very Flexible

FlexGanttFX allows the developer to customize every single aspect of its appearance and behaviour via CSS and the use of pluggable renderers and editing policies.

[More... »](#)



Very Fast

FlexGanttFX utilizes a perfect mix of scene graph / scene nodes and canvas API to ensure that even the largest data sets can be rendered quickly.

[More... »](#)



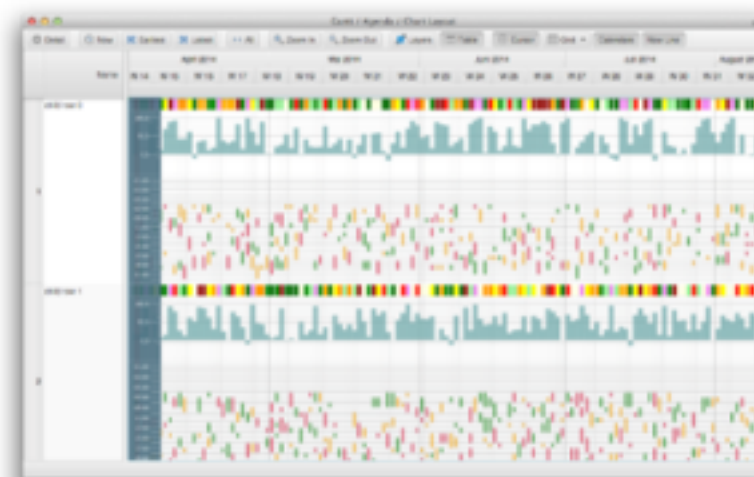
Very Elegant

FlexGanttFX is not just pretty on the outside but also on the inside. A lot of work went into the API to make it as intuitive to use by developers as the UI is by the users.

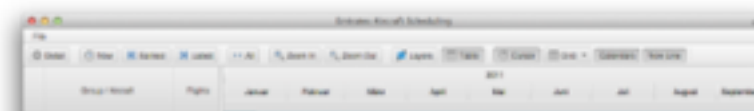
[More... »](#)

Flexibility. It'll blow your mind.

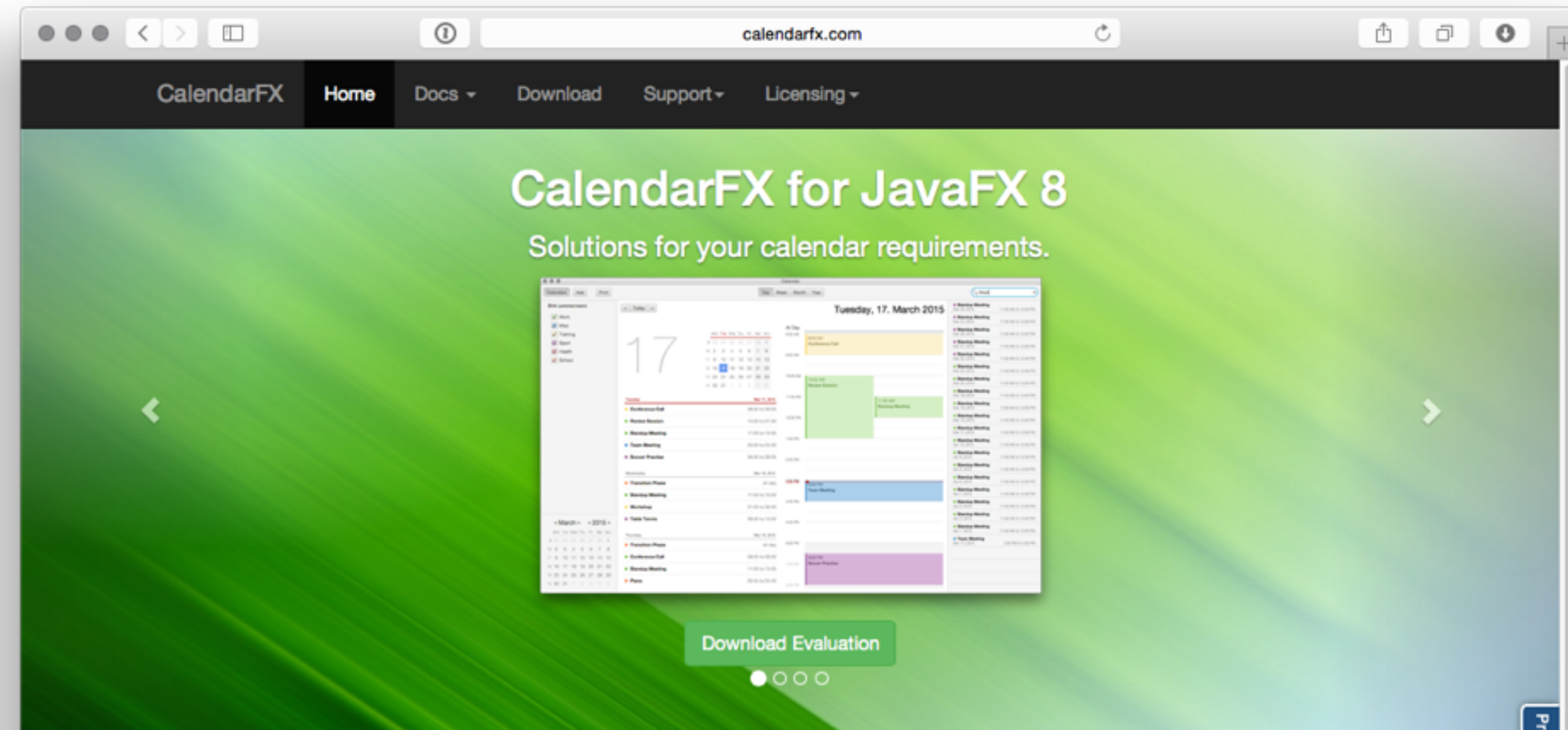
Different scheduling applications have different needs. They require different visualisations and different interactions. Whether your application needs to display one task per row or thousands of non-overlapping manufacturing activities on different lines within the same row, FlexGanttFX can render them all. And everything will look exactly as you want them to look like, due to FlexGanttFX's pluggable renderer architecture and the JavaFX canvas API.



Speed. For lots of data.



Open #speed on this page in a new tab



Customizable

Developers can customize the appearance and behaviour via CSS and pluggable factories and callbacks.



Fast

Prebuilt controls allow developers to quickly impress their management with good looking results.

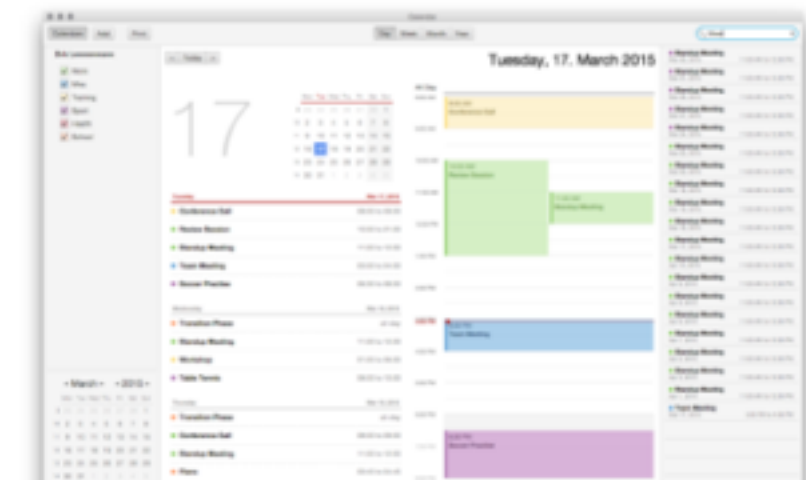


Elegant

Developers will feel right at home with an easy to use API that is consistent with standard JavaFX controls.

Day View. Focus on a single day.

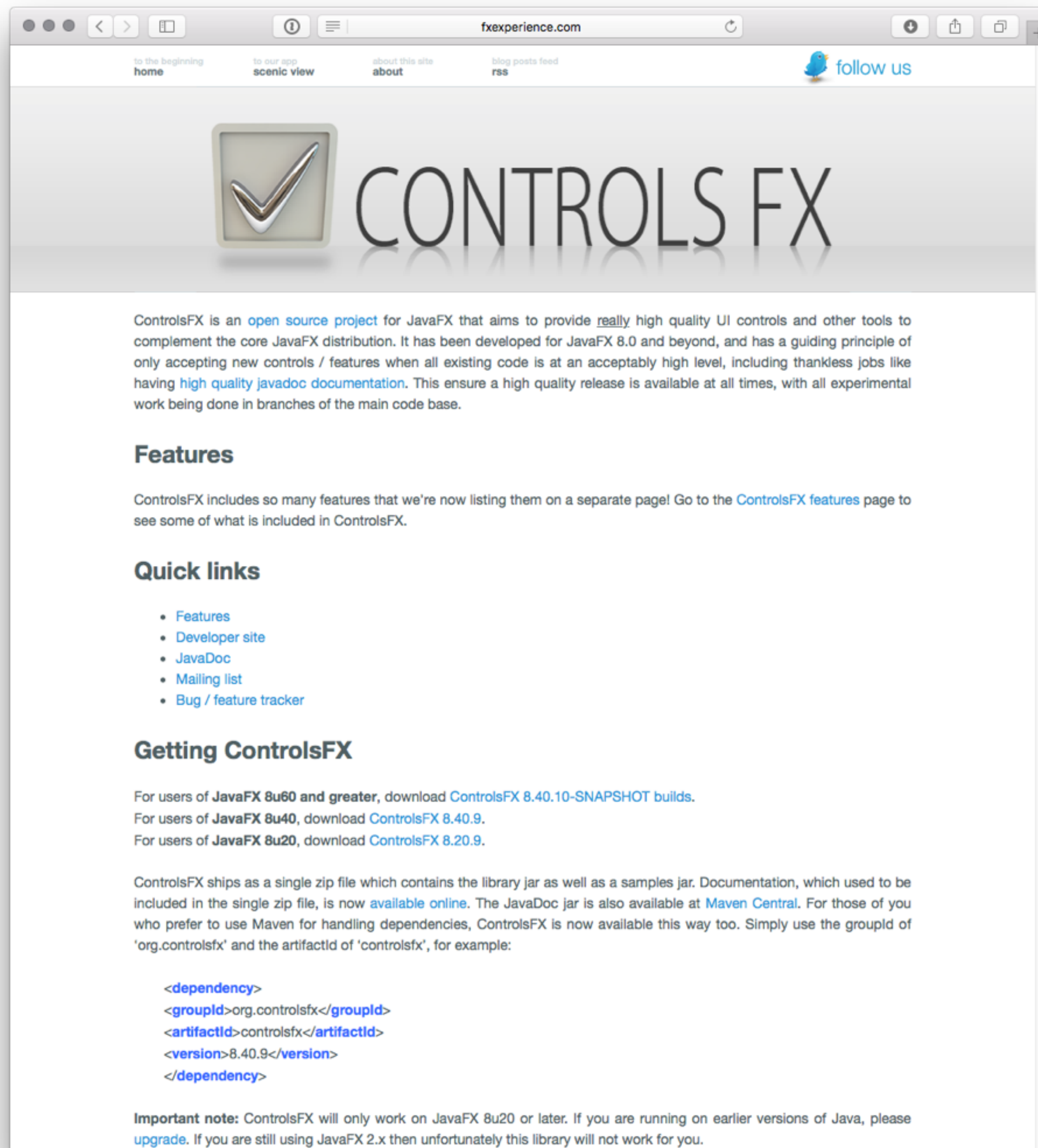
The day view allows the user to focus his attention on one day only. The view displays entries made on this day and also full day entries that intersect with it. Applications can configure the view to display a fixed number of hours in the viewport or to display hours at a fixed height. Entries can be dragged up and down. Start and end times can be changed. Smart layout algorithms ensure that entries will not overlap each other. Factories can be used to create custom views for each calendar entry. CSS can be applied to implement a specific theme for the controls.



Week View. Any number of days.

Out of the box the week view is configured to display seven days, however it can be configured to show any number of days. Different applications have different needs. Some only need to see the work days and not weekends. Others might need to always





- PopOver
- HiddenSidesPane
- MasterDetailPane
- TaskProgressView
- PlusMinusSlider
- ListSelectionView

Alexander Casall

Software Architect & Scrum Product Owner



Saxonia Systems
So geht Software.

Custom Software Development Company in Germany

Dresden, Munich, Berlin, Hamburg, Leipzig...

225 employees

3 Scrum Teams in JavaFX Projects

±7 consultants supporting JavaFX projects on customer side



Company: Emirates Airlines
App: Network Capacity Optimization
Domain: Resource Scheduling
Location: Dubai, UAE

Network Capacity Optimization

- Users: Network Planning Department
- Go live: within next 3 months
- Budget: 7 Million Dhiraams (\$2 Million)
- 9 Months Development
- 20 Developers, 8 on UI
- 50,000 classes

Submit a Request

Flight Upgrade

Flight Downgrade

Flight Cancel

Time Change

Route Change

Seat Configuration



Requests for My Action (59)

My Submitted Requests (2)

All Pending Requests (3)

My Drafts (0)

Authorise Scenarios (1)

All Proactive Requests (266)



Req ID	Req Type	Date	Flight No.	Sector	Route	Revenue (AED)	Source/Dept	No. of Scenarios	Active Scenario Sta
REQ-EXT-DXB-LHR-DXB-21Oct15-27	Extra Flight	21-Oct-2015		(RT) DUBAI(DXB)-LONDON HEATHRO...	DXB-LHR-DXB	10000.00	ENCOM	1	Draft
REQ-EXT-DXB-SIN-DXB-21Oct15-26	Extra Flight	21-Oct-2015		(RT) DUBAI(DXB)-SINGAPORE(SIN)	DXB-SIN-DXB	10000.00	ENCOM	2	Draft
REQ-TIM-568-569-31Oct15-29	Flight Time Change	31-Oct-2015	568 / 569	(RT) DUBAI(DXB)-BENGALURU(BLR)	DXB-BLR-DXB		ENCOM	2	Awaiting Implementatio
REQ-TIM-568-569-31Oct15-28	Flight Time Change	31-Oct-2015	568	(RT) DUBAI(DXB)-BENGALURU(BLR)	DXB-BLR-DXB		ENCOM		
REQ-CAN-538-539-19Oct15-56	Flight Cancel	19-Oct-2015	538 / 539	(RT) DUBAI(DXB)-AHMEDABAD(AMD)	DXB-AMD-DXB		ENCOM	Create Scenario	
REQ-CAN-538-539-20Oct15-57	Flight Cancel	20-Oct-2015	538 / 539	(RT) DUBAI(DXB)-AHMEDABAD(AMD)	DXB-AMD-DXB		ENCOM		
REQ-CHR-DXB-RUH-DXB-26Oct15-14	Charter Flight	26-Oct-2015		(RT) DUBAI(DXB)-RIYADH(RUH)	DXB - RUH - DXB	11111.00	ENCOM	1	Invalidated
REQ-EXT-DXB-AMD-DXB-22Oct15-25	Extra Flight	22-Oct-2015		(RT) DUBAI(DXB)-AHMEDABAD(AMD)	DXB-AMD-DXB	611050.00	ENCOM	1	Awaiting Implementatio
REQ-EXT-DXB-DOH-DXB-25Nov15-24	Extra Flight	25-Nov-2015		(RT) DUBAI(DXB)-DOHA(DOH)	DXB-DOH-DXB	4.00	ENCOM	1	Draft
REQ-CHR-DXB-DUB-SNN-BFS-10Nov1...	Charter Flight	10-Nov-2015		DUBAI(DXB)-(BFS)	DXB - DUB - SNN - BFS	22.00	ENCOM	2	Draft
REQ-EXT-DXB-HYD-DXB-23Oct15-23	Extra Flight	23-Oct-2015		(RT) DUBAI(DXB)-HYDERABAD(HYD)	DXB-HYD-DXB	61050.00	ENCOM	1	Draft
REQ-UPG-512-513-16Oct15-8	Flight Upgrade	16-Oct-2015	512 / 513	(RT) DUBAI(DXB)-DELHI(DEL)	DXB-DEL-DXB	4000.00	ENCOM	1	Draft

Request Explorer

Create Scenario

Reject

Export to Excel

View Requests for My Actions History

Note : Revenue specifies additional revenue for upgrade and seat configuration and total revenue for extra flight

0 Bulletin

30 Alerts & Notifications

0 Messages

Legend

* Mark fields are mandatory

Tech Info

- JBoss Application Server
- 3rd Party Libs: ControlsFX & FlexGanttFX
- Maven
- Eclipse

Register



Company: AISO

App: HRC-Matic

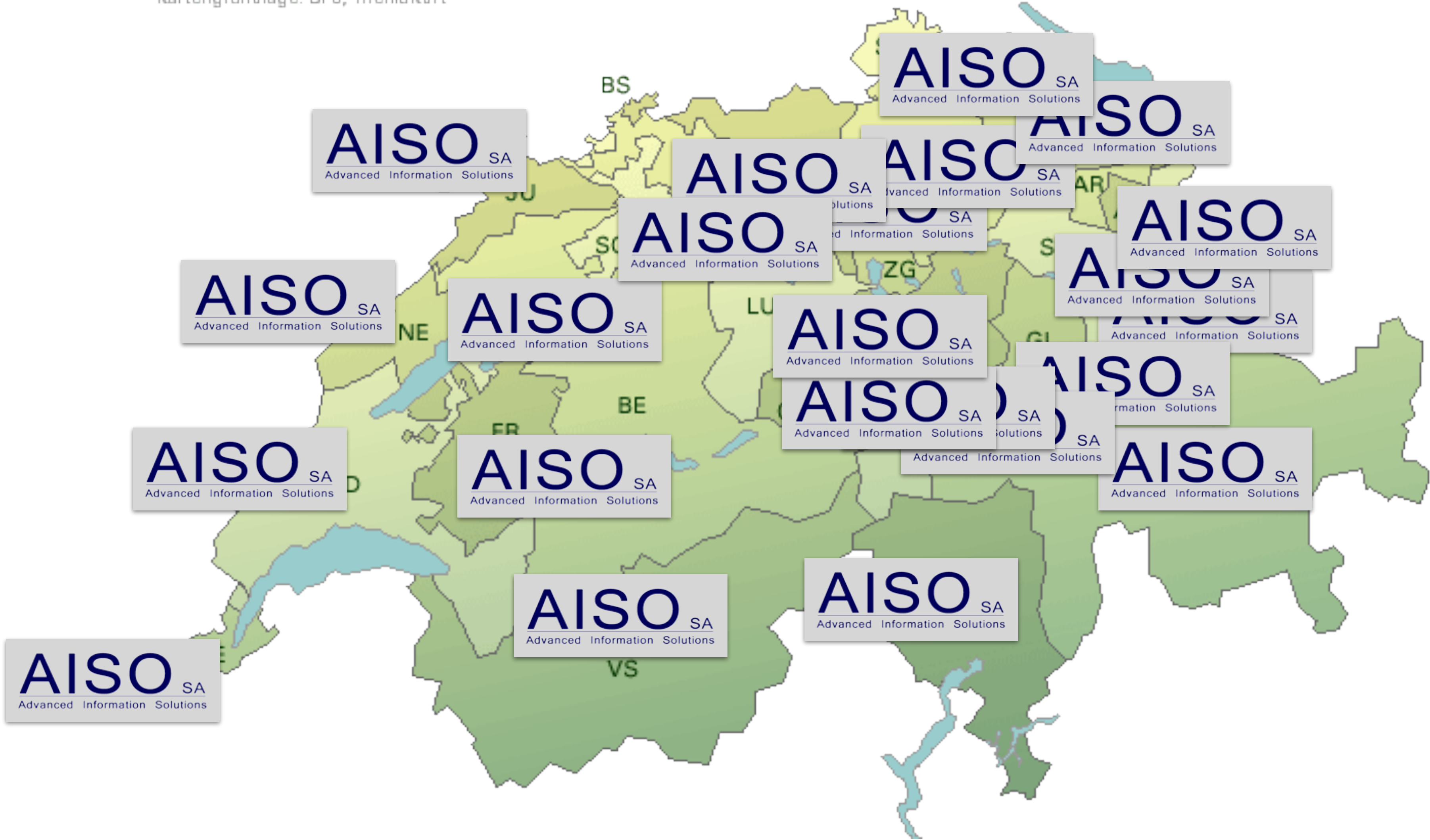
Domain: Business Registry

Location: Geneva, CH

HRC-Matic

- Business Registry Software
- Manages requests for registration, modification, or cancellation of companies.
- 170,000 lines of code, 3400 classes
- Budget: \$1.8 Million

Kartengrundlage: BFS, ThemaKart



AISO_{SA}
Advanced Information Solutions

AISO_{SA}
Advanced Information Solutions

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Advanced Information Solutions

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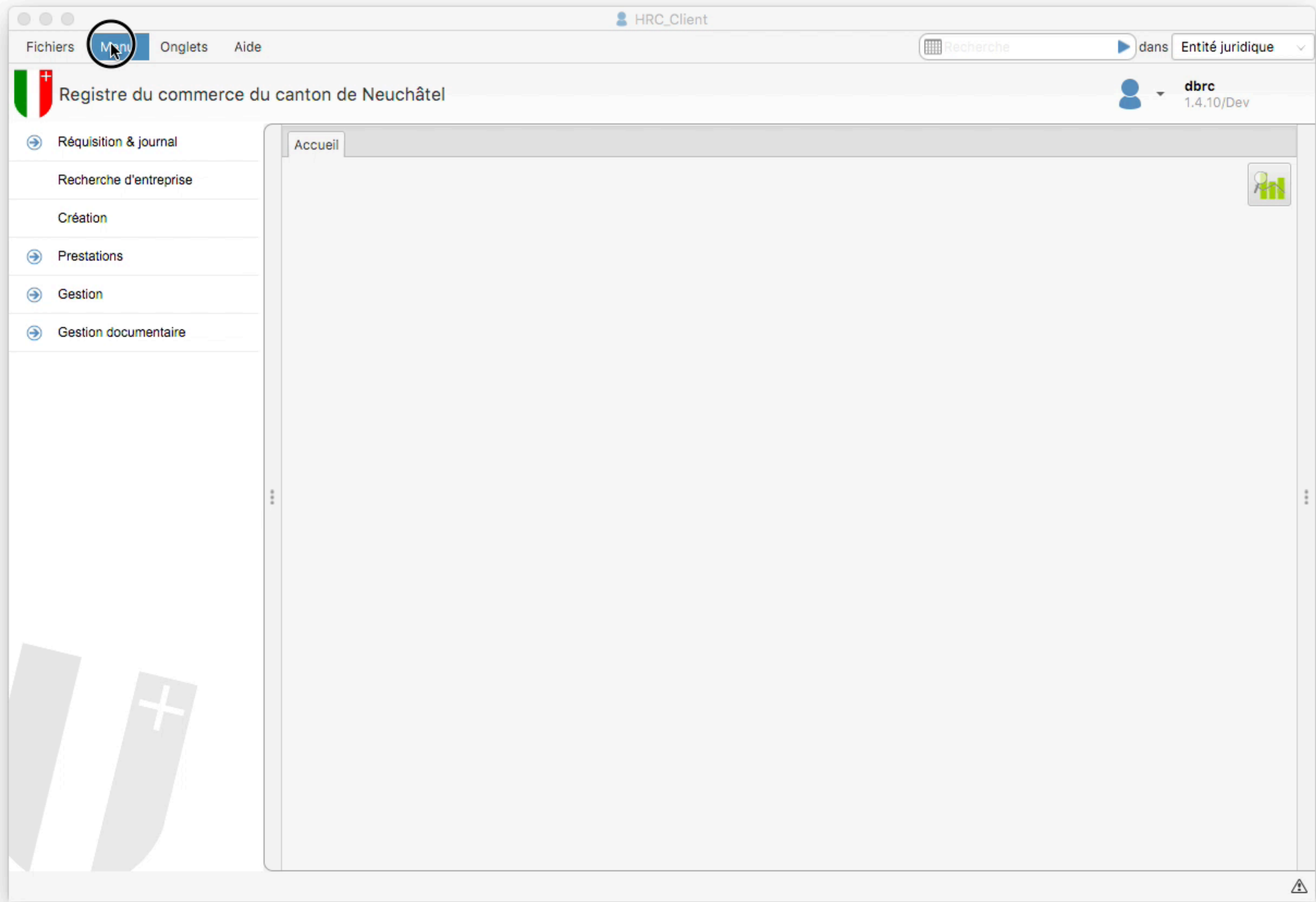
AISO_{SA}
Advanced Information Solutions

AISO_{SA}
Advanced Information Solutions

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Advanced Information Solutions

AISO_{SA}
Advanced Information Solutions



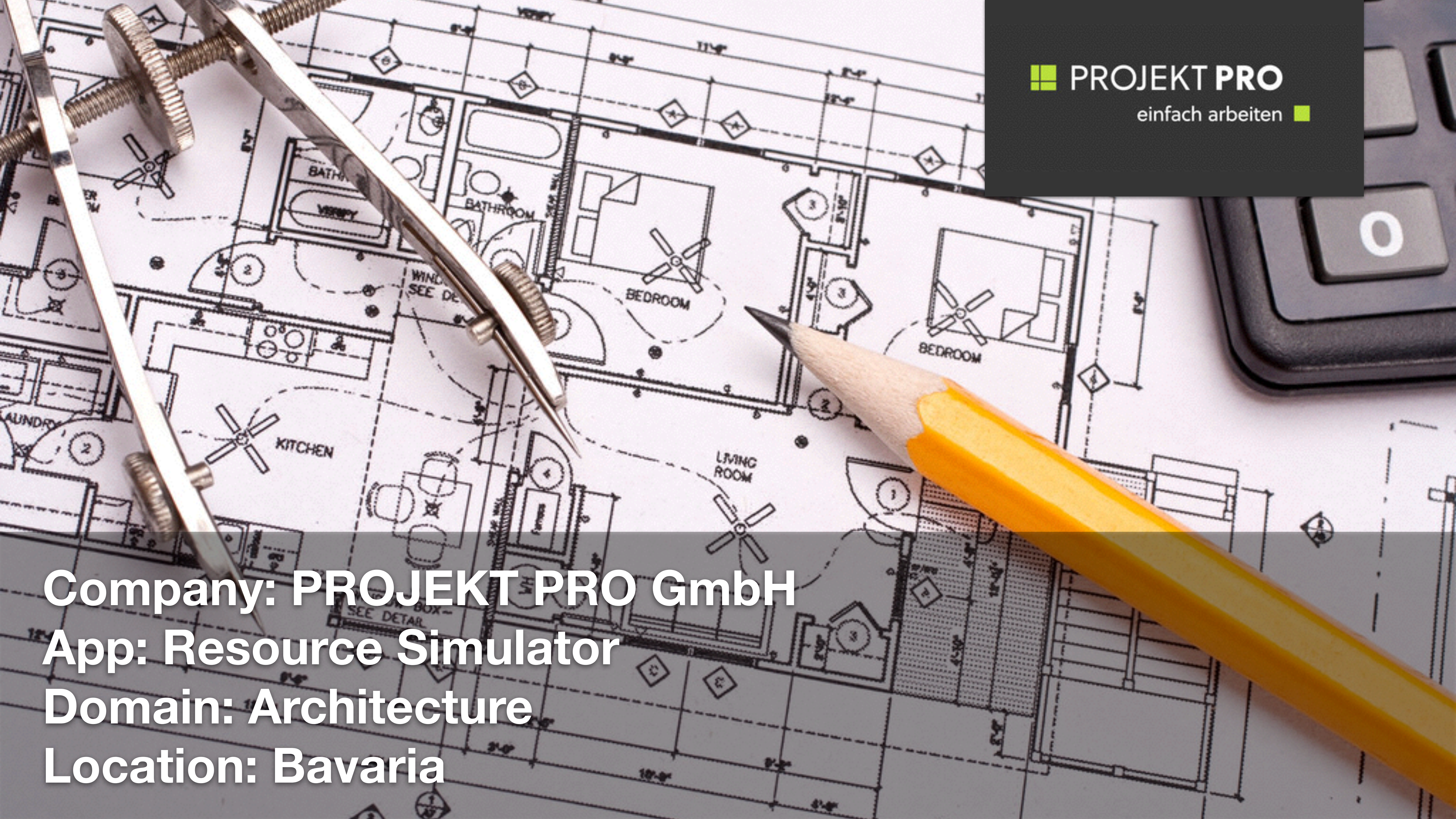
HRC-Matic Challenges

- Focus Management
- TableView Control (support for direct editing)
- Missing Controls (LoV Box, Autosuggest)

HRC-Matic

Why not HTML?

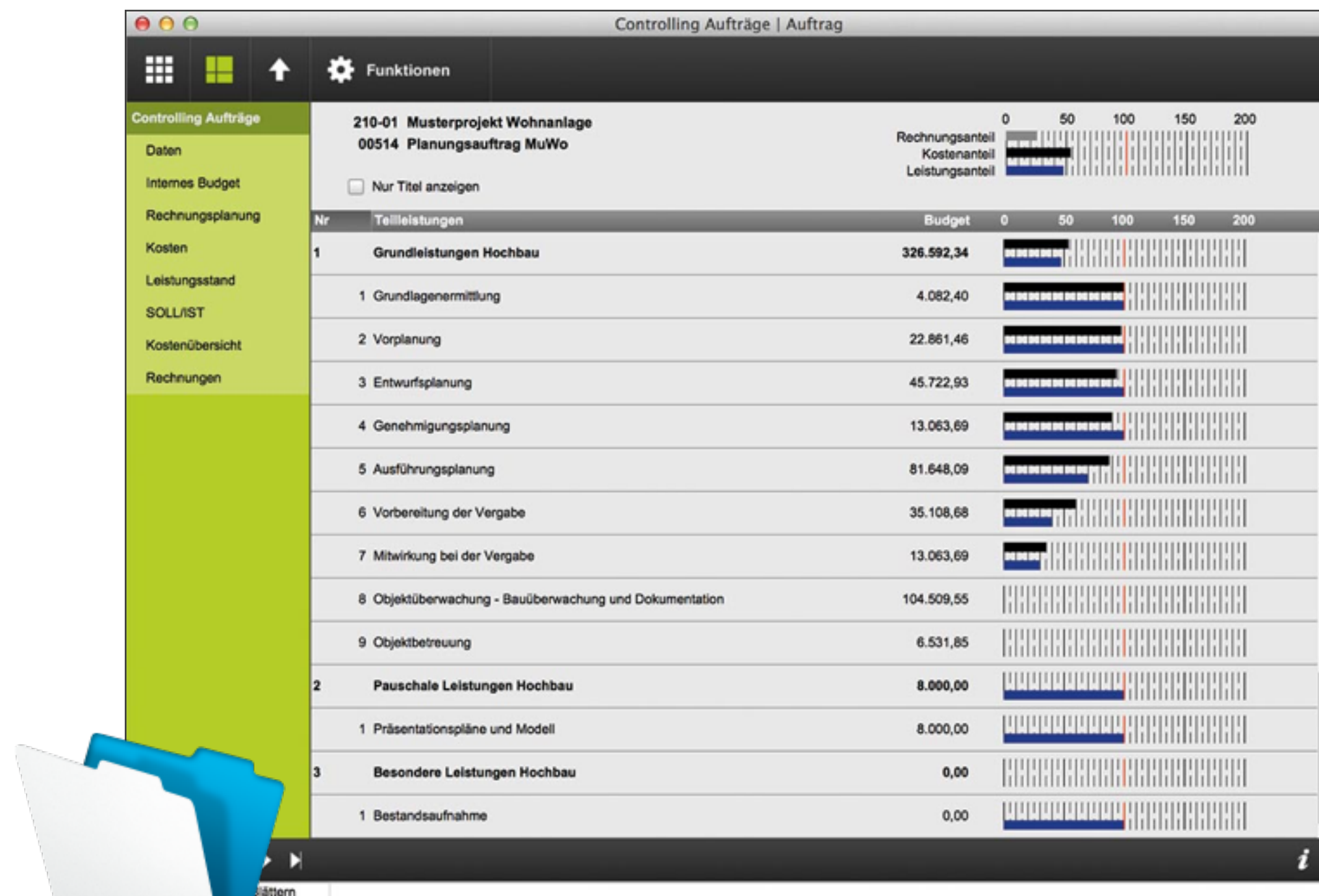
- No guarantee of sustainability.
- Short term technology life cycle.
- Low performance risk.
- Compatibility risks with various web browsers used by our customers.
- Upgrade costs due to a change in web technology.



Company: PROJEKT PRO GmbH
App: Resource Simulator
Domain: Architecture
Location: Bavaria

PRO Simulation

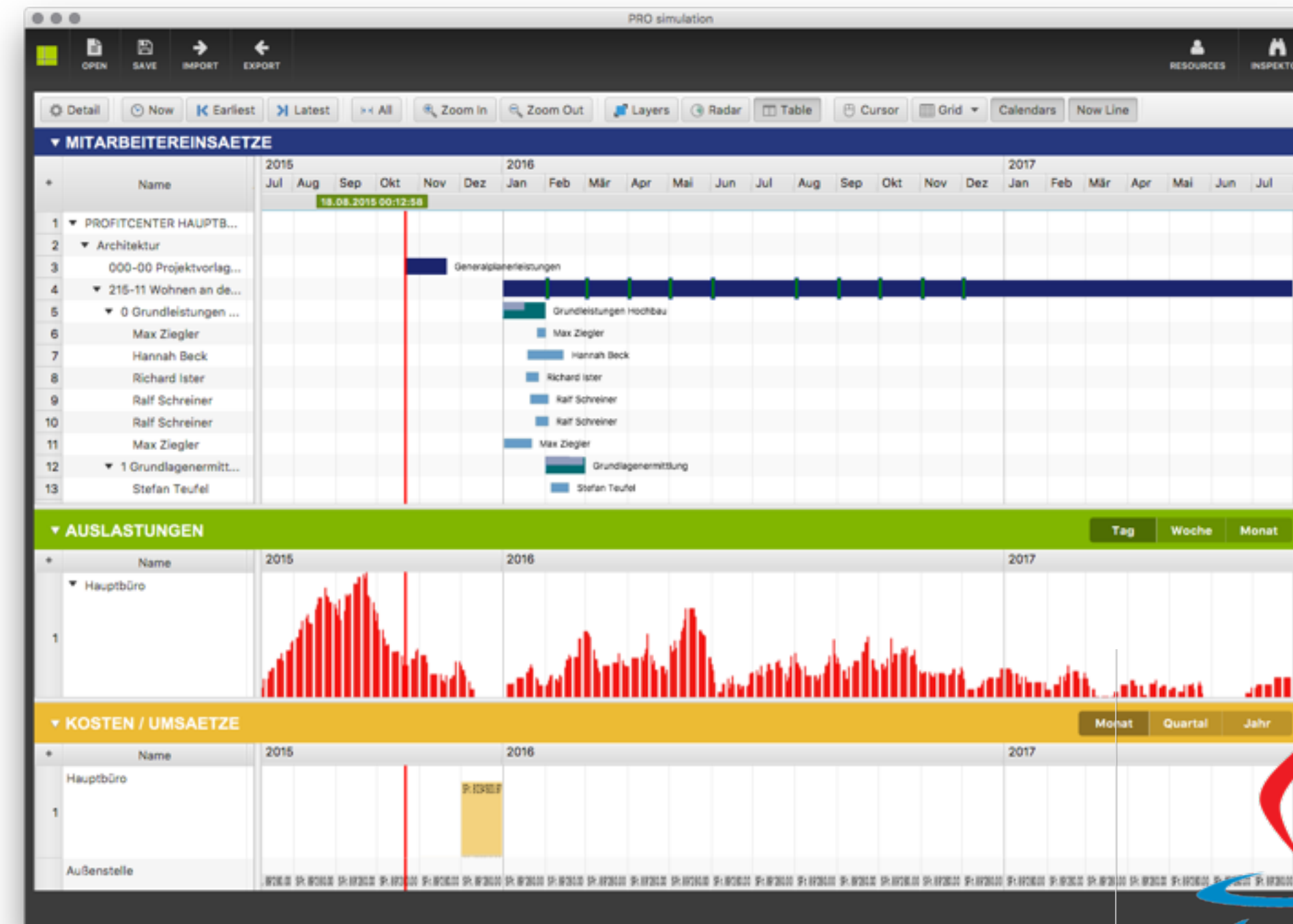
- Used for intuitive scheduling of human and monetary resources
- Explore different scenarios, pick best one
- Part of ProjektPRO product family
 - FileMaker-based
 - Controlling, project, and office management
 - Used by architects and engineers



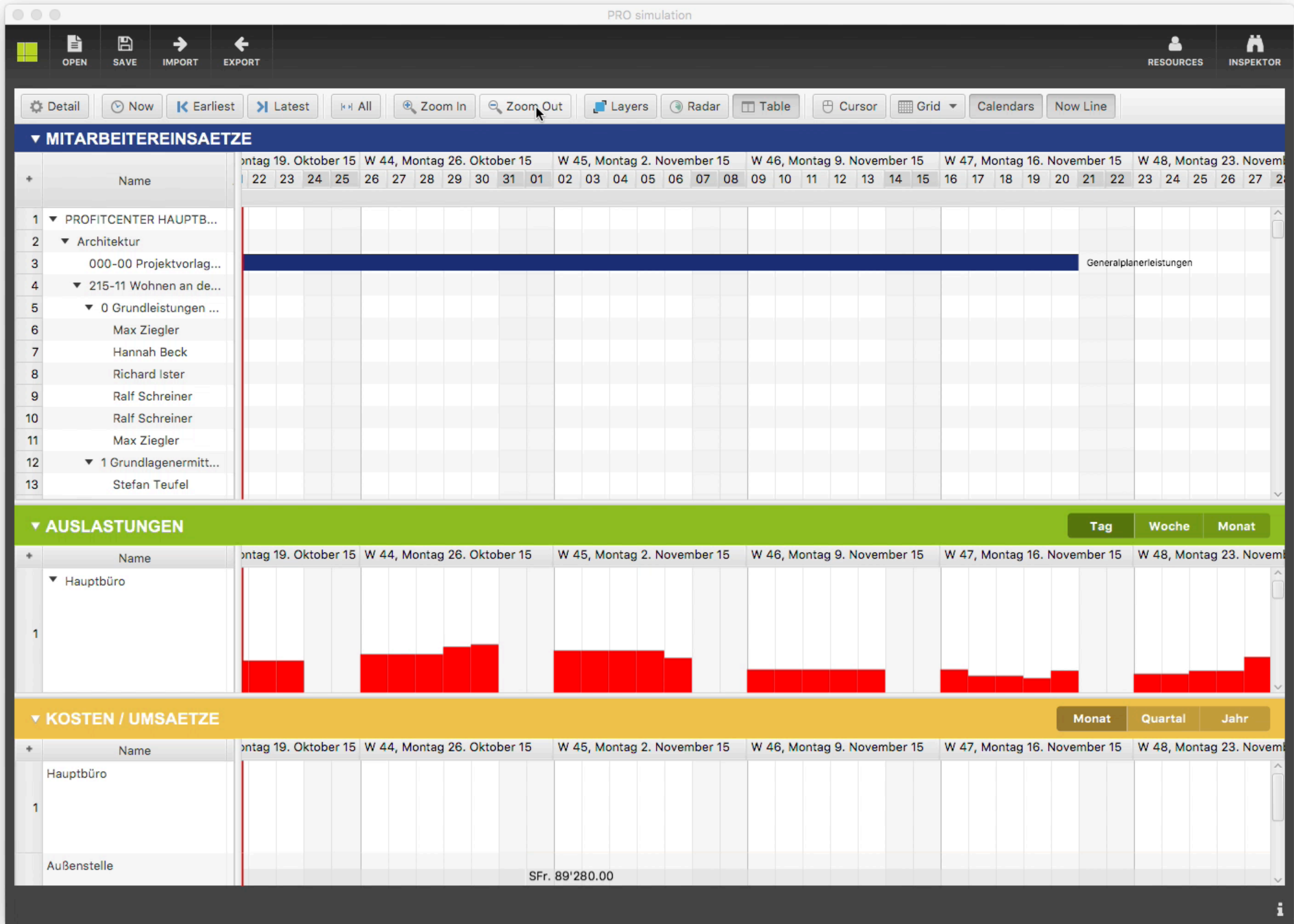
FileMaker



RDMS



RDMS



Technical Info

- Maven, Eclipse, GIT (Bitbucket)
- FontAwesomeFX
- ControlsFX
- FlexGanttFX
- Hibernate
- SQLite

**THE FOLLOWING PREVIEW HAS BEEN APPROVED FOR
APPROPRIATE AUDIENCES
BY THE MOVIEGOERS ASSOCIATION OF AMERICA**

THE FILM ADVERTISED HAS BEEN RATED

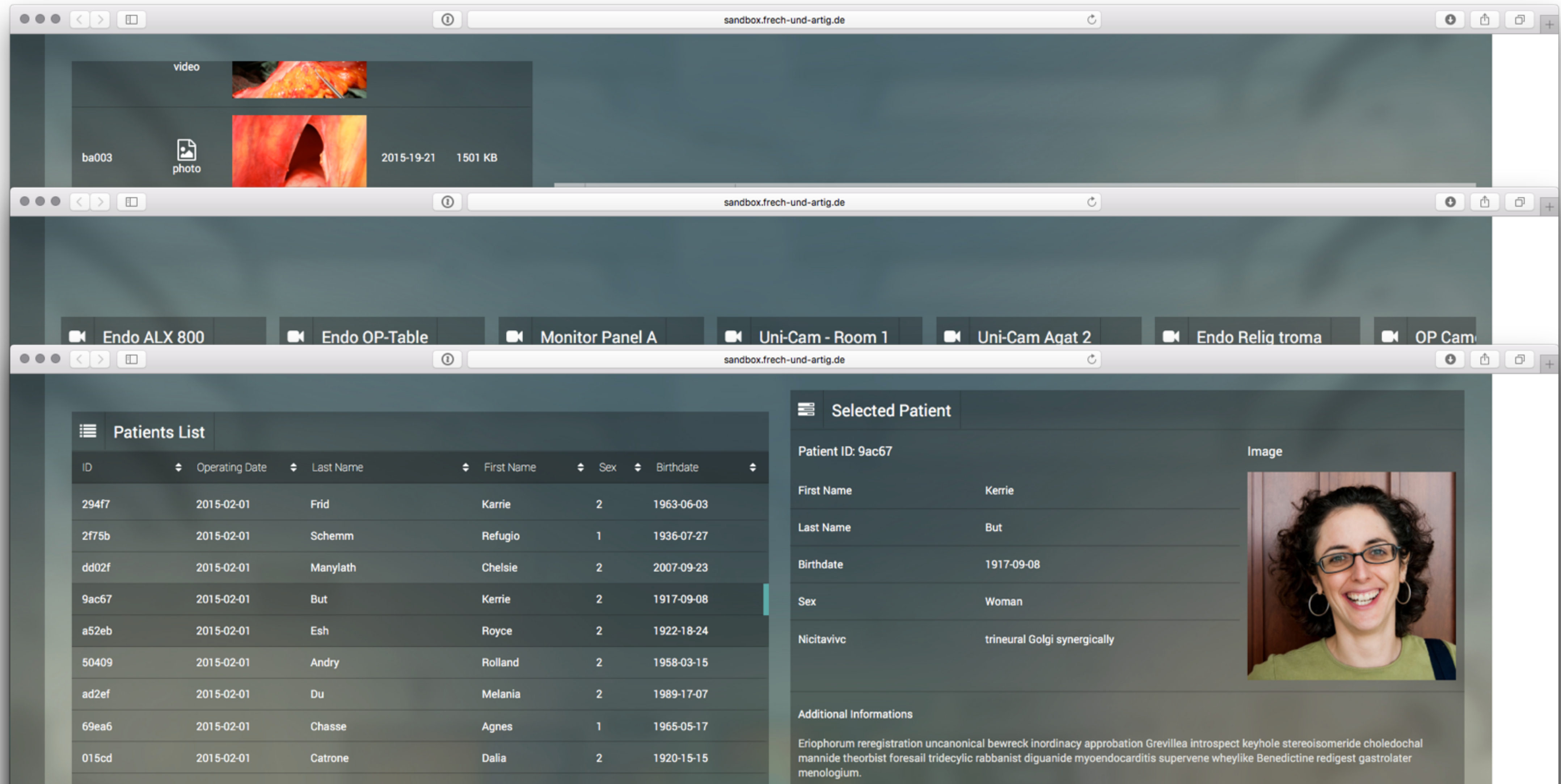


www.flickboy.com



Company: EIZO
Application: CALIOP Surgery Panel
Domain: Medical
Location: Karlsruhe, Germany

HTML Mockup





Caliop Login

Surgical Panel Room 1.02

Select a login option.



Emergency



OP Profil



User Login

Curator

EIZO Surgical Panel

Digital Image Viewing Solution and Central Control Unit



3rd Party Client Technology

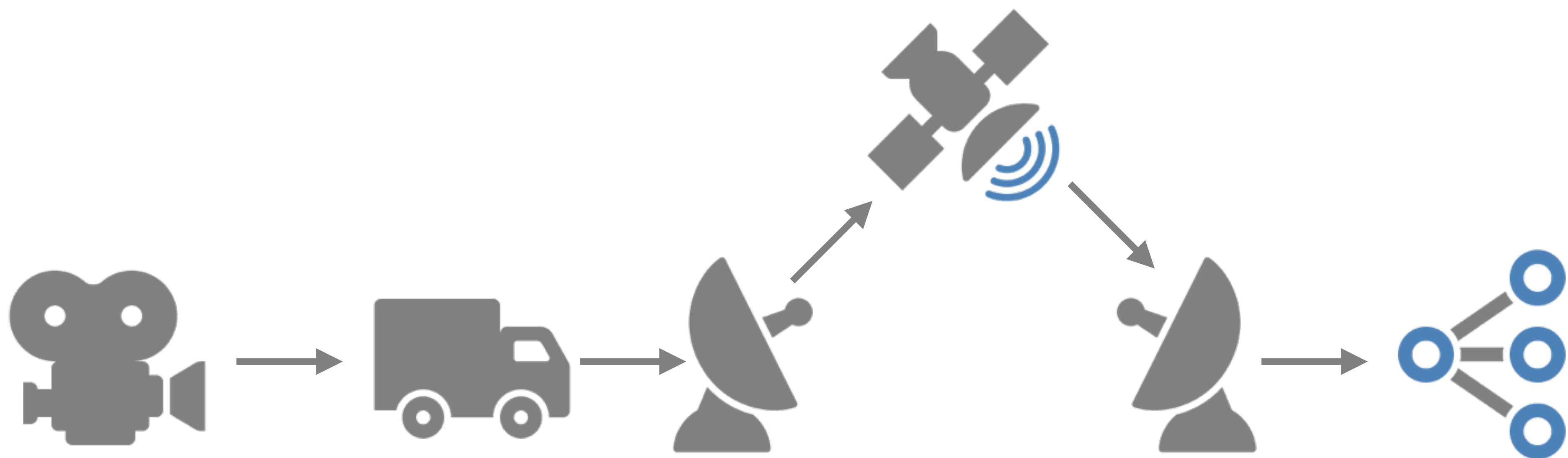
- **ControlsFX**
 - for additional controls
- **afterburner.fx**
 - for harnessing the complexity (modules)
- **FontAwesomeFX**
 - for pretty icons (HTML mockup also used FontAwesome)



Company: European Broadcasting Union (EBU)
Application: NEOS - New Eurovision Operations System
Domain: TV and Radio Broadcasting
Location: Geneva, Switzerland

NEOS

- 150 dispatchers at EBU
- Planning TV and radio transmissions from A to B
- Budget: \$3 Million
- 15 Developers
- 2000 classes, 1000 UI



TXM NO		TIMING				LINE UP		APPROX OUT	TYPE	STATUS		INTERNAL COMMUNICATION	
TXM NO	TX15.000452	TXM	*02/01/201€	*09:35	-	*02/01/201€	*09:55	00:10	00:15	UNI	TXM	Comple	Refresh done
CO NO	CO15.000045	PROG.			-			DUR	20m		SYN	Synopsis	

Event No	22919 - GB SPECIAL EVEI	Title	GB SPECIAL EVENT
Source	*Manual	Description	Transmission 02
Complexity	<input type="range"/>	Txm Group	Group 2
Customer	GBBBC - BRITISH BROAD	Bill To	GBBBCL - BBC Worldwide

The screenshot displays the GDS interface for resource management. On the left, a sidebar contains navigation icons and a search bar. The main area is divided into two panels. The top panel, titled 'GNVE ZZEBU', lists resources and their durations. The bottom panel, titled 'EU7B', shows a detailed view of the 'EU7B/B1' resource, including a table of channel durations and a timeline view. The timeline view shows a grid of time slots from 08:00 to 11:00 on January 2, 2018. The grid is divided into columns for each hour and rows for each minute. The top bar is orange, indicating a specific resource or status. The bottom bar is green, indicating another resource or status. The timeline view is titled 'GNVE ZZEBU' and shows a grid of time slots from 08:00 to 11:00 on January 2, 2018.

Resource	Duration
Requirement : ORIGIN	11SD
Requirement : AMERICAS	11SD
Requirement : ORIGIN	11SD
Requirement : AMERICAS	11SD
Clear LNDN GBBBC	11SD
Clear LNDN GBBBC/LNDN.BBC_F14BBC_33673	11SD
Clear GNVE ZZEBU/ENC4	11SD
Clear GNVE ZZEBU/ENC6	11SD
EU7B/B1 Show Channels	11SD
EU7B/B1 Show Channels	11SD
Clear GNVE ZZEBU/CV1	11SD
Clear GNVE ZZEBU/CV3	11SD

Resource	Duration
EU7B/B1	6.0 9.0 12.0 18.0 24.0 36.0
Hide Channels	1A6 1A9 1A12 1A18 1A24 1A36
	1B6 1B9 1C12 1D6 1D9 1E6 1E9 1F6 1G6 1G9 1G12 1G18 1G24 1G36
	1H6 1H9 1K6 1K12 1K18 1K24 1L6 1L9 1M6 1M9 1M12 1N6

The timeline view shows a grid of time slots from 08:00 to 11:00 on January 2, 2018. The grid is divided into columns for each hour and rows for each minute. The top bar is orange, indicating a specific resource or status. The bottom bar is green, indicating another resource or status. The timeline view is titled 'GNVE ZZEBU' and shows a grid of time slots from 08:00 to 11:00 on January 2, 2018.

NEOS Development 21/10/2015 09:24 (NotIdentifiedUser)

FileToolsPreferences

Search Resource X

Search Criteria :

Resource

Parent

Profile

Owner

Status

ACTIVE

Ext Name

Ext. View

Automatic PO


Property

Template

Code	Name	Pr...	Parent	Owner	Event	Ext. View	External N...	Routing C...	Schedule Seq...	
Kein Content in Tabelle										

Tech Info

- ControlsFX
- afterburner.fx
- FlexGanttFX
- JEntityFX



Company: MINT Software Systems
Application: MINT TRMS
Domain: Training and Resource Management (Airlines)
Location: Kiel, Germany

MINT TRMS

- Used by training departments of airlines, technical facilities and production companies in the aviation and other training intensive industries.
- Used for records and skill management, training planning, electronic online and offline grading and e-learning.
- JavaFX version is operational since 2013 (earlier versions since 1998)

MINT TRMS

Tech Info

- 8 - 10 developers on UI and backend
- Total: 1.8 million lines of code, 6300 classes
- JavaFX: 1.1 million lines of code, 4800 classes (inc. Swing left-overs)
- 3rd party frameworks: ControlsFX, FlexGanttFX

MINT

View < not set >

MINT Software Systems v10.1.2.20 Jobs Help ADMINISTRATOR

Organizations and Customers: 'MINT Samp...'

MINT Sample Organisation

Flight Deck Crew and Training

Cabin Crew and Training

Maintenance Training Organisation (EASA Part-145)

Maintenance Organisation (EASA Part-145)

Production Organisation (EASA Part 21 Subpart G)

Air Traffic Controller Training

Flight School

Helicopter Training

Record Items and Requirements: no selection

Flight Deck Crew (FD)

Flight Deck Crew Instructor Qualifications

Flight Deck Crew Qualifications

Flight Deck Crew Training Records and FORMS

Flight Deck Crew Room and Equipment Qualifications

Flight Deck Roles and Responsibilities

Requirements

Categories: no selection

Products and Tasks

Trainings and Products

Flight Deck Crew (FD)

Cabin Crew (CC)

Cabin Crew Initial Course (all fleets)

Cabin Crew SEP Recurrent Course

Cabin Crew JC BusClass Promotion Course

Cabin Crew FC FirstClass Promotion Course

Cabin Crew Purser Course

Cabin Crew Senior Purser Course

Maintenance Training Organisation (EASA Part-145)

Maintenance Organisation (EASA Part-145)

	Status	Photo	Name	Location	Organisation	R
178	!		Davinci	Hamburg	Flight School T...	HR
179	!		Boyer	Frankfurt	FG 02	HR
180	!		Cruce	Miami	Helicopter Crew	HR
181	!		Lichten...	Miami	Helicopter Crew	HR
182	!		Frostad	Miami	Helicopter Crew	HR
183	!		Hewlett	Miami	Cabin Crew N...	HR
184	!		Alvarez	Singapore	Flight Deck Cr...	HR
185	!		Elgar	Miami	Cabin Crew	HR
186	!		Duerr	Frankfurt	WG 08	HR
187	!		Elwell	Miami	Helicopter Trai...	HR
188	!		Starkey	Miami	Flight Deck Cr...	HR
189	!		Hemm...	Hamburg	Flight School T...	HR
190	!		Silk	Miami	Helicopter Crew	HR
191	!		Botnick	Miami	Cabin Crew	HR
192	!		Garcia	Miami	Helicopter Crew	HR
193	!		Farleigh	Miami	Helicopter Trai...	HR
194	!		Rivera	Miami	Cabin Crew	HR

Rows: 259

W 48, Sonntag 30.November.14

W 49, Sonntag 7.Dezember.14

8 Sa 29 So 30 Mo 01 Di 02 Mi 03 Do 04 Fr 05 Sa 06 So 07 Mo 08 Di 09 Mi 10 Do 11 Fr 12 Sa 13 Sc

Vacation

Title Scheduled Start Planning Complete Location

41 MIA-PP... 11.01.2015 16:00 Yes Miami

42 MIA-M... 04.01.2015 08:30 Yes Miami

43 S-76 Ini... 01.12.2014 08:00 Yes Miami

44 S92 Initi... 01.12.2014 08:00 Yes Miami

45 Bell 412... 01.12.2014 08:00 Yes Miami

46 HF II 01.12.2014 08:00 Yes Miami

47 MIA-CB... 18.11.2014 09:00 Yes Miami

Rows: 181

Now

Published schedule

S-76 Initial7

S92 Initial7

Bell 412 New Hires7

H...

Edit Report: Resource

Create a report query and design a report to show and print the query results.

PropertiesQueryDataDesignReport

Execute ReportUndoDeleteGrid 10px

Elements

Components

Image

Rectangle

Label

Subreport

Textbox

Containers

Frame

Tools

Current Date

Page Count

Page Number

Page X of Y

Outline

Report Design

Fields

Variables

System Variables

Title

Label

Label

Label

Name

Id

Rectangle

Label

Organization

Title

Page Header

Detail

Summary

Page Footer

Resource Report

Name: Name

Location: Location

Id: Id

Organization: Organization

Creation

Photo

Resource Report

Resource Info

Subreport: Assigned Record Items

Subreport: Assigned Projects

Properties

Search

Basic

Name

Location

Data

Evaluation Time

Immediate

Expression

\$F{Location Name}

Pattern

Link Expr

Print-When E...

Print Repeat...

☒

Layout

X

230

Y

100

Width

150

Height

20

Stretch

☐

Style

Font

Arial 14pt

Horz-Align

Left

Vert-Align

Top

Padding

0

Border

none

ForeGd Color

Black

OK

Cancel

Apply

Edit Report: Resource

Create a report query and design a report to show and print the query results.

PropertiesQueryDataDesignReport

Save asPrint...

1 / 8

Actual SizeFit PageFit Width

57%


Resource Report

Name:
Binning, Kathy

Location:
Frankfurt

Id:
003553

Organization:
Flight Deck Crew



Created in MINT at Sat Feb 01 11:08:35 UTC 2014 by ADMINISTRATOR

Record Item	Assignment Date	Assigned By
PRNAV SID or STAR (per crew - contingencies to be	08.05.2015 11:08	DEMO
Stall warning/avoidance	08.05.2015 11:08	DEMO
(E)GPWS	08.05.2015 11:08	DEMO
Weather radar, radio altimeter or transponder	08.05.2015 11:08	DEMO
Radios, av equipment, instruments and FM(G)S	08.05.2015 11:08	DEMO
Landing gear and brake system	08.05.2015 11:08	DEMO
Slat and flap system	08.05.2015 11:08	DEMO
APU	08.05.2015 11:08	DEMO
Circling Approach	08.05.2015 11:08	DEMO
Capt incapacitation on take-off F/O RTO	08.05.2015 11:08	DEMO
Hold and procedural approach	08.05.2015 11:08	DEMO
Item 7(d) to be completed single engine	08.05.2015 11:08	DEMO
Discontinued approach/baulked landing	08.05.2015 11:08	DEMO
Manually flown ILS with no FD	08.05.2015 11:08	DEMO
LLZ BB (widebodies only) - may be training or tested	08.05.2015 11:08	DEMO
Fuel Dumping (A330 Only)	08.05.2015 11:08	DEMO
Windshear at Take Off/Landing	08.05.2015 11:08	DEMO
Cabin Pressure Failure/Emergency Descent	08.05.2015 11:08	DEMO
Crew Incapacitation	08.05.2015 11:08	DEMO
Other emergency procedure from AFM	08.05.2015 11:08	DEMO
TCAS	08.05.2015 11:08	DEMO
Engine (including start failures)	08.05.2015 11:08	DEMO
Pressurisation and air conditioning	08.05.2015 11:08	DEMO

OKCancelApply

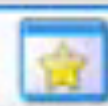
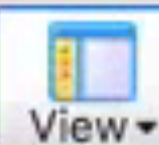


	Photo	Organisation	Name ▲	Resource type	Mi 03	Do 04	Fr 05	Sa 06	So 07	Mo 08	Di 09	Mi 10	Do 11	Fr 12
+					05.06.2015 08:42:46									
1		Flight Training	Briefing Room 1	Facility & Equipme										
2		Flight Training	Briefing Room 2	Facility & Equipme										
3		General	Classroom 1	Facility & Equipme										
4		Facilities & De...	Classroom 1	Facility & Equipme										
5		General	Classroom 2	Facility & Equipme										
6		Facilities & De...	Classroom 2	Facility & Equipme										
7		Flight Training	Lemmerman	HR-Staff										
8		Flight Training	Mc Gowan	HR-Staff										
9		Flight Training	Miller	HR-Staff										
10		Flight Training	Simulator 1	Facility & Equipme										
11		Flight Training	Simulator 2	Facility & Equipme										

	Title	Location	Scheduled Start ▾											
+			...			Now				Published schedule ...				
1	Airbus TNG 01-2015	Kiel (Sailin...												
2	Airbus TNG 02-2015	Kiel (Sailin...												
3	Airbus TNG 03-2015	Kiel (Sailin...												
4	Airbus TNG 04-2015	Kiel (Sailin...												
5	Airbus TNG 05-2015	Kiel (Sailin...												
6	Airbus TNG 06-2015	Kiel (Sailin...												
7	Airbus TNG 07-2015	Kiel (Sailin...												

Rows: 7

MINT TRMS

Issues

- Switching to new update release makes product incompatible with older Java versions: customers do not like that!
- Still a lot of Swing code that is causing issues: drag & drop, layout, threading, window ownership. ETC / App thread communication.
- Read also: <https://dlemmermann.wordpress.com/2014/07/17/javafx-tip-9-do-not-mix-swing-javafx/>