

In control with ControlsFX

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Session overview

- 1. ControlsFX overview
- 2. Introduction to ControlsFX features
- 3. Demonstration
- 4. How to get involved
- 5. Future plans
- 6. Wrapping up / question time



ControlsFX Overview

Answering your burning questions

How do I get involved?

What is it?

ControlsFX

Can it benefit me?

Why does it exist?

Who is involved?

Low bug count



ControlsFX

Business friendly licensing (BSD)

Focus on high quality API

Who is ControlsFX? Here today:



Eugene Ryzhikov



Jonathan Giles

Not here today:

- Sven Reimers
- John Malc
- Stefan Saring
- Henri Biestro
- Ryan Jaeb
- Werner Lehmann
- Jean-François Henrard
- Jens Deters
- Badisi
- Dirk Lemmermann
- Tomas Mikula
- Dennis Lee
- Julien Coloos
- Paul Jonas

- Pascal Büttiker
- Pedro Duque Vieira
- Dennis Fischer
- Alice Sotzek
- Anirvan Sarkar
- Adam Kosta
- Gabriel Féron
- Carolina Veiga
- Artur Biesiadowski
- Yair Oren
- Davide Nabais
- Tom Eugelink
- Michał Skowroński
- Uwe Sander
- Laurent Gebus

- Geoffrey Capper
- Romain Moreau
- Sriram Raghuraman
- Mario Voigt
- Ruben Paz
- jonathan millman
- Michael Berry
- Chen Gaofeng
- Γεράσιμος Μάκης
 Μαρόπουλος
- Ladislav Török
- Tiziano Lattisi
- Victor Alfonso
- Pineda Orozco
- Daniel Rodrigues

Not here today:

- Christian Michelsen
- Takayuki Shoji
- Farzaneh Taleb
- Steffen Rachner
- Manel Sanchez i Ruiz
- Samir Hadzic
- John Zeringue
- István Avramucz
- Marek Budyn
- George Keith Watson
- Christoph Keimel
- Łukasz Śliwiński
- George Moralis
- Yann D'Isanto
- István Avramucz

- James Denvir
- Carlos Martins
- Andreas Liebelt
- André Lanouette
- Ralf Schmitt
- Thijs Walcarius
- Roger Terrell
- Thomas Nield
- Jason Pollastrini
- Bastien Aracil
- Haval Ahmed
- Jeff Plourde
- Cole Markham
- Nathaniel Sherry

- Márcio Rodrigues
- Robert Lichtenberger
- Christoph Keimel
- Sarah Skanes
- Michael Ellis
- Arthur McGibbon
- Robert B. Colton
- Farrokh Ghamsary
- Harald Herres
- Vitomir Spasojevic
- John Brandon
- Magliano Agarwal

Not here today:

István Avramucz

Márcio Rodrigues **Christian Michelsen** James Denvir Robert Lichtenberger Takayuki Shoji **Carlos Martins Christoph Keimel** Farzaneh Taleb Andreas Liebelt Sarah Skanes Steffen Rachner André Lanouette ichael Ellis Manel Sanchez i thur McGibbon Samir Hadzic obert B. Colton John Zeringue All up, there are over 90 contributors to ControlsFX! arrokh Ghamsary István Avramucz arald Herres Marek Budyn tomir Spasojevic George Keith Wa John Brandon Christoph Keimel Haval Ahmed Magliano Agarwal Łukasz Śliwiński Jeff Plourde George Moralis Cole Markham Yann D'Isanto Nathaniel Sherry



- More importantly, it can be you!
- ControlsFX welcomes contributions
 - Bug fixes,
 - Translations,
 - New features,
 - New controls
- We review all code that comes in, so you can learn a lot!
- We are not a dumping ground for halfimplemented ideas though!

What is ControlsFX? - Releases

Version	Release Date	Release Gap	Downloads
ControlsFX 8.0.0 Developer Preview 1	May 7, 2013	-	720
ControlsFX 8.0.0	June 3, 2013	~ One month	627
ControlsFX 8.0.1	July 7, 2013	~ One month	536
ControlsFX 8.0.2 Developer Preview 1	August 11, 2013	~ One month	513
ControlsFX 8.0.2 Developer Preview 2	September 11, 2013	~ One month	420
ControlsFX 8.0.2	October 11, 2013	~ One month	881
ControlsFX 8.0.3	December 4, 2013	~ Two months	614
ControlsFX 8.0.4	December 28, 2013	~ One month	1382
ControlsFX 8.0.5	March 4, 2014	~ Two months	3974
ControlsFX 8.0.6	May 29, 2014	~ Two months	8324*
ControlsFX 8.20.7	September 30, 2014	~ Four months	2129*
ControlsFX 8.20.8	October 19, 2014	~ One month	16917*
ControlsFX 8.20.9 / 8.40.9	June 1, 2015	~ Eight months!	1188* / 5319*
ControlsFX 8.40.10	October 26, 2015	~ Five months	-

What is ControlsFX? - Releases

- Releases are generally slowing down
- Why?
 - ControlsFX has filled in a lot of gaps in the JavaFX UI controls
 - A lot of the 'interesting' problems are solved
 - Focus is shifting more to quality, rather than new features
- Pull requests and new features are still being accepted though!

Why does ControlsFX exist?

- Official JavaFX UI controls are developed slowly and their APIs are fixed once released.
 - Jonathan should know He the tech lead of JavaFX UI Controls at Oracle
- ControlsFX exists to fill the gaps in JavaFX UI Controls:
 - API is much less rigid in ControlsFX
 - <u>But:</u> API quality is required to be exceptionally high to release
 - We follow the same API patterns as in JavaFX for consistency

Who uses ControlsFX?

NASA Magnetospheric Multiscale Mission Support Software

- Mission info mms.gsfc.nava.gov
- Developed at the Goddard Space Flight Center by ai-solutions, NASA partner
- Sean Phillips, lead developer, and his team will be discussing and demonstrating some of the software developed for NASA at their sessions.



Who uses ControlsFX?

- PIP open source medical image analysis tool for for use with cancer research projects at the Department of Pathology and Laboratory Medicine of Johns Hopkins Hospital
- **Alt.Text** tool for exploring alternatives in text documents
- **ESPLab** JavaFX 8 GUI for ESP devices

We know there is a lot more ...



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ControlsFX Features

Dialog API The beginning



- Featured since the first ControlsFX release ATMETE
- Enjoys wide popularity •
- Quickly became the de-facto Dialog API for JavaFX •
- Became a "victim of its own success" •
 - Accepted and promoted to be a part of JavaFX, starting with JavaFX 8u40

Dialog API Current status



- Huge amount of API development in JavaFX 8u40.
- Totally different API compared to ControlsFX (although implementation is the same).
- What happened to the 'original' ControlsFX dialogs:
 - When our dialogs went into JavaFX, we deprecated our alternate API.
 - We have now removed the deprecated dialogs from ControlsFX
 - All dialogs that are now offered in JavaFX are not offered in ControlsFX
 - ControlsFX now uses the new, official API to provide dialogs not available in JavaFX itself.

Dialog API openjfx-dialogs



- openjfx-dialogs is a fork of JavaFX 8u40 dialogs API
- Works fine in 8u20
- Fork is manually updated when necessary from openjfx
- Available online under OpenJDK license (GPL + Classpath):
 - http://bitbucket.org/controlsfx/openjfx-dialogs

Wizard API

- First iteration , based on openjfx-dialogs
- WizardPane based DialogPane
- Wizard.Flow interface defines the logic of page traversal
- Wizard.LinearFlow simple linear flow
- Custom flows can be easily defined
- Wizard handles page history automatically

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Property Sheet

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contextMenu	
cursor defaultButton depthTest disable effect ellipsisString eventDispatcher focusTraversab	
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- Support for JavaBeans properties, as well as custom property models
- Includes prebuilt editors as well as ability to register custom ones
- Property grouping by name or category
- Property filtering
- Can also be used to implement simple forms.

Action API

- JavaFX is missing an Action API, so we implemented it.
- Action is an EventHandler<ActionEvent> implementing all common properties.
- Can create UI controls such as buttons, menu items, etc from an Action
- Can define an 'action tree' to effortlessly build ToolBar, MenuBar and ContextMenu
- @ActionProxy annotation. Methods annotated with it become actions automatically

Decoration / Validation API





- Can decorate nodes through CSS or graphic at predefined positions
- Decoration is used as visual feedback mechanism for Validation API
- Validation API is designed to be lightweight but flexible

Glyph Font API



- Inspired by Jens Deters' excellent FontAwesomeFX library
- Supports any icon fonts, such as FontAwesome, IcoMoon etc
- Extended use of icon fonts in Action API: @ActionProxy(text="Action Text", image="font>FontAwesome|STAR")

Notification API





- NotificationPane: overlay pane, animates in and out, support for graphics, text, controls, has several visual styles
- Notifications: Similar to NotificationPane but a separate window. Can appear in one of nine locations on the screen, support for stacking multiple notifications and showing complex screen graphs. Fades out after a set duration.

SpreadsheetView

TableView-like control that supports:

- Cell spanning
- Fixed rows and columns
- Cell editing



CheckComboBox CheckListView CheckTreeView



- All three controls extend the standard JavaFX UI control
- Adds support for a 'check model', to allow developers to easily
 - Check specific indices / items
 - Retrieve checked indices / items

PopOver



Provides information in a visually pleasing way, without interfering with user's workflow.

TextField API





- Autocomplete TextField
- Clearable Fields
- Decorated Fields, where nodes can be placed within the text area.
 - Text does not go underneath the decoration!

Range Slider



- Standard JavaFX slider but with two draggable thumbs, instead of one.
- Thumbs represent low and high values.
- User can drag range bar to concurrently adjust both values

FX Sampler



- To demonstrate ControlsFX, we built FX Sampler
- Standalone application that detects samples at runtime
- Can be used by anyone wanting to demonstrate their samples
 - E.g. JFXtras, FlexGanttFX and FXForm2 use it
 - Overall 19 downloads of the last release

Even more controls

- Border API: wraps nodes and panes with a border
- BreadCrumbBar: Simple navigator for hierarchical page structures
- GridView: fast, virtualized grid container. Great for showing images
- HiddenSidesPane: Pane with possible hidden side panes
- HyperlinkLabel: Label with clickable links
- InfoOverlay: Designed to show text comment over a node
- MasterDetailPane: Details pane can be made invisible on demand.
- PlusMinusSlider: Allows continuous scrolling through large datasets
- Rating: Shows star rating, including partial ratings
- SegmentedButton: Visually groups toggle buttons together
- SnapshotView: Draw a bounding box on screen graph and get selection



Demonstration



If you think you have a feature you can contribute, a bug you want to fix please review our guide for contributors

Build Status and Project Links

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Jenkins (ControlsFX samples build status)	Tall cours. Talls
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Jenkins (FXSampler build status)	maven central (8.0.6.79
Latest published version in Maven Central	ober 1827 SUBCERS
Open Hub (Repository stats)	dependencies none
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Version Eye (External project references)	

Getting Involved

Getting Started - In Six Simple Steps!



The following software is required:

- Mercurial
- Gradle
- JDK 8u40



You'll need a Bitbucket account Accounts are free from http://bitbucket.org



Getting Started - In Six Simple Steps!

Fork the repo.

Go here to create your own fork

https://bitbucket.org/controlsfx/controlsfx/fork



Clone your fork:

hg clone https://<username>@bitbucket.org/<username>/<forkname>

• e.g.

hg clone https://eryzhikov@bitbucket.org/eryzhikov/controlsfx
Getting Started - In Six Simple Steps!



Build your clone. From clone root directory, run:

gradle clean assemble





ControlsFX is an open source project for JavaFX that aims to provide <u>really</u> high quality UI controls and other tools to complement the core JavaFX distribution. It has been developed for JavaFX 8.0 and beyond, and has a guiding principle of only accepting new controls / features when all existing code is at an acceptably high level, including thankless jobs like having high quality javadoc documentation. This ensure a high quality release is available at all times, with all experimental work being done in branches of the main code base.

Features

ControlsFX includes so many features that we're now listing them on a separate page! Go to the ControlsFX features page to see some of what is included in ControlsFX.

Quick links

- Features
- Developer site
- JavaDoc
- Mailing list
- Bug / feature tracker

Getting ControlsFX

For ControlsFX 8.0.6 we are releasing two separate releases:

ControlsFX.org

All Classes	OVERVIEW PACKAGE CLASS TREE D	DEPRECATED INDEX HELP	î						
Packages	PREV NEXT FRAMES NO FRAMES								
org.controlstk.control org.controlsk.control.action org.controlsk.control.cell org.controlsk.control.decoration org.controlsk.control.spreadsheet org.controlsk.control.texfield org.controlsk.control.texfield org.controlsk.control.texfield org.controlsk.property org.controlsk.property org.controlsk.property org.controlsk.property org.controlsk.property.cellfor	Controlsfx 8.0.6 API Welcome to the JavaDoc for the ControlsFX project! We've really poured our hearts into this documentation to make it a great one-stop shop for learning how to use ControlsFX - refer to the links at the end of this page for other useful sites related to ControlsFX. See: Description								
All Classes	Package	Description							
AbstractAction AbstractValidationDecoration Action ActionGroup ActionOroup ActionProxy ActionUtis ActionTextBehavior ActionUtis ActionTextBehavior AutoCompletionBinding AutoCompletio	org.controlsfx.control	A package containing a number of useful controls-related classes that do not exist in the base JavaFX distribution.							
	org.controlsfx.control.action	A package containing the $\tt Action$ API, as well as the <code>AbstractAction</code> convenience subclass.							
	org.controlsfx.control.cell	A package containing a number of useful cell-related classes that do not exist in the base JavaFX distribution, many related to the new GridView control offered in ControlsFX.							
	org.controlsfx.control.decoration	A package containing decoration-related API (that is, API to allow for users to 'decorate' nodes with additional nodes or css decorations.							
AutoCompletionBinding.ISuggestionRe BeanProperty	org.controlsfx.control.spreadsheet	A package containing model and view related classes used by the ${\tt SpreadsheetView}$ control.							
BeanPropertyUtils Borders	org.controlsfx.control.textfield	A package containing a number of useful classes related to text input.							
Borders Border BreadCrumbBar BreadCrumbBar ButonBar ButonBar ButonBar ButonBar ButonBar ButonBar CheckListVew CheckListVew CheckListVew ColorGridCell CompoundValidationDecoration CustomTeAffeld	org.controlsfx.dialog	A package containing a powerful (yet easy to use) dialogs API for showing modal dialogs in JavaFX-based applications.							
	org.controlsfx.glyphfont	A package containing a number of useful code related to loading and using font packs whose characters are actually images.							
	org.controlsfx.property	A package containing a number of useful classes related to the PropertySheet control.							
	org.controlsfx.property.editor	A package containing a number of useful editor classes related to the PropertySheet control.							
	org.controlsfx.tools	A package containing a number of useful utility methods.							
Decoration Decorator DefaultDialogAction	org.controlsfx.validation	A package containing validation-related API (that is, API to allow for developers to easily validate user input, and to provide visual feedback on the results).							
DefaultPropertyEditorFactory	org.controlsfx.validation.decoration	A package containing decoration API specific to the validation framework.	~						

docs.controlsfx.org

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ші ф	Last updated just now Website http://www.controlsfx.org/ Language Java Access level Read	6 Branches 77 Forks	13 Tags 121 Watchers	Recent activity Major redesign of 'SnapshotView' Pull request #407 commented on in controlsF/X Eugene Ryzhikov - 48 minutes ago Major redesign of 'SnapshotView'					
₽ ₫ 0 4	Overview ControlsFX is an open source project for JavaFX that a controls and other fools to complement the core JavaF JavaFX 8.0 and beyond, and has a guiding principle of when all existing code is at an acceptably high level, in	 Pull request #407 commented on in controlsfx/ControlsFX Jonathan Giles - 50 minutes ago Major redesign of 'SnapshotView' Pull request #407 commented on in controlsfx/ControlsFX Eugene Ryzhikov - 52 minutes ago 							
٥	quality javadoc documentation. This ensure a high qua experimental work being done in branches of the main You can learn more about ControlsFX on its website, a for an overview of everything ControlsFX offers.	Major redesign of 'SnapshotView' Pull request #407 commented on in controlst/ControlsFX Jonathan Giles -55 minutes ago							
	If you think you have a feature you can contribute, a be for contributors Build Status and Project Links	Major redesign of 'SnapshotView' Pull request #407 commented on in controlsfx/ControlsFX Jonathan Giles - 56 minutes ago							
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code.controlsfx.org

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Ů \$	#303: modena.bss style errors with PropertySheet using Java 1.8.0_20 b23 propertysheet		NEW	1	ControlsFX	Final R	8.0.6	2014-07-	22	2 days	ago	
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	#353: Dialog blocking application if message is too long dialogs		NEW			Final R	8.0.6	2014-08-	28	2014-0)8-28	
	#350: RangeSlider only allows min value of "0" in FXML general		NEW			Final R	8.0.6	2014-08-	27	2014-0	8-27	
	#348: [RangeSlider] initialization value max negative does not work		NEW			Final R	8.0.6	2014-08-	26	2014-0	8-26	
	#318: Single or multiple selection mode in SpreadsheetView SpreadsheetV	۲	NEW		関 Samir Hadzic	Final R	8.0.7	2014-08-04		2014-08-26		
	#343: Add a border to selection in SpreadsheetView SpreadsheetV		NEW		📳 Samir Hadzic	Final R	8.0.7	2014-08-	22	2014-0	8-25	
>>	#321: Notification bars overlay content rather than squeeze it		NEW			Final R	8.0.7	2014-08-	05	2014-0	8-25	

issues.controlsfx.org



groups.controlsfx.org



i18n.controlsfx.org

Where is ControlsFX? - at Maven Central

 Stable builds are available in Maven Central at http://releases.controlsfx.org: groupId : org.controlsfx artifactId : controlsfx

 Our CI server pushes latest snapshots every hour to http://snapshots.controlsfx.org

How To Contribute

- ControlsFX is open source
- ControlsFX has a CLA that needs signing (http://cla.controlsfx.org)
- Everyone works in their own fork
- All contributions are submitted as pull requests
- Pull requests are reviewed and merged ASAP.

How To Contribute

Pull request stats:

- Jonathan is naughty he commits directly to the repo
- Everyone else:
 - Over 550 pull requests have been merged
 - Around 50 have been declined
 - Another 11 or so are pending review

What Should You Contribute

Anything!

- (although acceptance is not guaranteed)
- If in doubt, post to controlsfx-dev and ask
- Bug fixes, javadocs, samples are just about always welcome.
- New features can be discussed on a per-feature basis
 - Our focus on quality means we don't want to accept all features



Future Plans

Future Plans

We have a lot still to do! Ideas include:

- Improve Scene Builder support
- Accessibility support (using new a11y API in JavaFX 8u40)
- Research / implement a GlassPane API
 - Rewrite decoration / validation API to use this
 - Reintroduce lightweight dialogs
- TableView improvements
 - Improved search / filter tools
- Docking framework

Future Plans - JideFX

JIDE Software has contributed all their JideFX work to ControlsFX
JideFX is a huge collection of UI controls and API, including:

- JideFX Common: Searchable, IntelliHints, ShapedPopup and a bunch of utilities
- JideFX Converters: Collection of ObjectConverters (compatible with JavaFX StringConverter)
- JideFX Comparators: Collection of comparators
- JideFX Decoration: Inject a decoration node to any existing node without affecting the layout
- JideFX Validation: Provides complete validation support for any JavaFX controls
- JideFX Fields: Contains several TextField and ComboBoxBase subclasses such as MaskTextField, FormattedTextField, many PopupFields, FormattedComboBoxes, and Spinners for different data types.



Wrapping Up

Conclusion

- ControlsFX is a growing project
- It depends on the community
 - Don't be a passive user get active and help grow the project!
- Development is done in lieu of family time, and is unpaid
 - Expectations should be calibrated accordingly.
 - ControlsFX would gladly accept donations from generous benefactors

Show your appreciation by ranking this session highly!



Thanks for attending! Question Time!

http://www.controlsfx.org http://code.controlsfx.org http://groups.controlsfx.org