

Introducing JFace Data Binding



Code name: Krispy Kreme
(with inspiration from Glazed Lists)

Purpose

- Explain why you should care about data binding
- Describe how Krispy Kreme works
- Show Krispy Kreme in action
- Point to further information on Krispy Kreme

Why data binding?

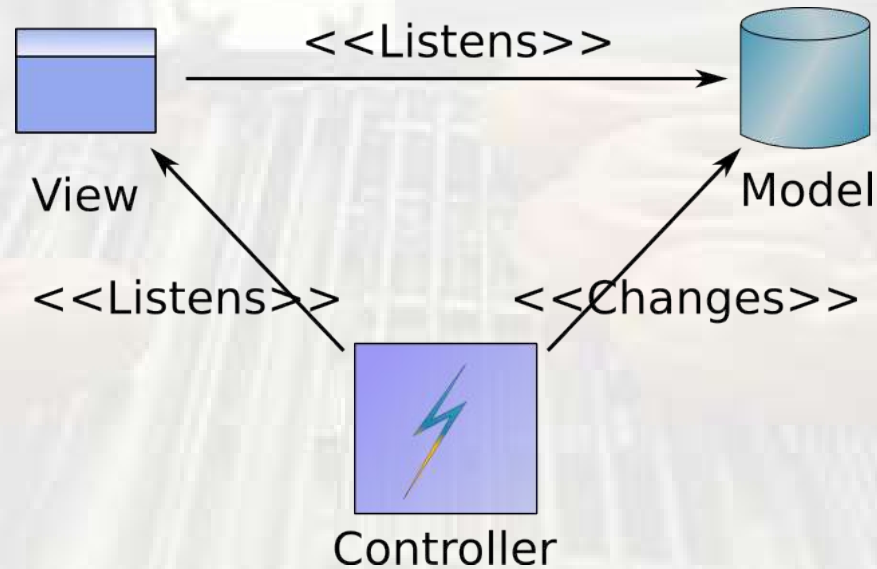
- Writing data driven user interfaces by hand is painful
 - There is lots of repetitive boilerplate event handling code
 - Constantly converting between the model data type (ie: int age) and the UI's data type (ie: String getText / setText) is a pain
 - Validating user data entry is a combinatorial problem where $n ==$ the number of controls on a data entry form
- To speed up development
 - Current project: ~40% team velocity improvement with Krispy Kreme
- It tastes good 😊

Why data binding with JFace Krispy Kreme?

- Helps automate some of the most painful areas in an RCP application
- Compatible with standards:
 - Uses standard Java interfaces like `java.util.List` whenever possible
- Extensible:
 - For example: bind from/to remote objects across a network
- ***Result: You deliver Eclipse RCP applications faster, more easily, with fewer defects.***

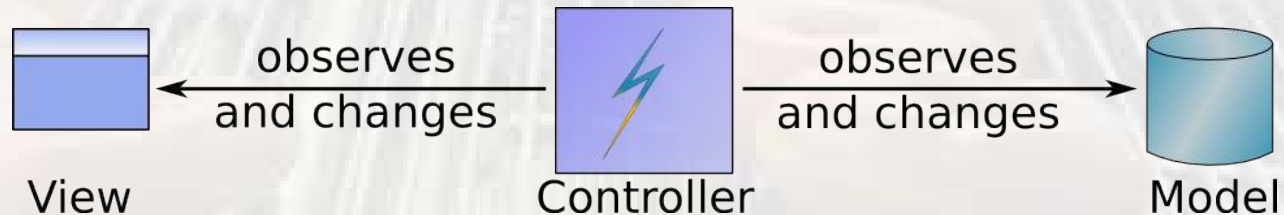
What is Krispy Kreme?

- Improves and updates Model-View-Controller

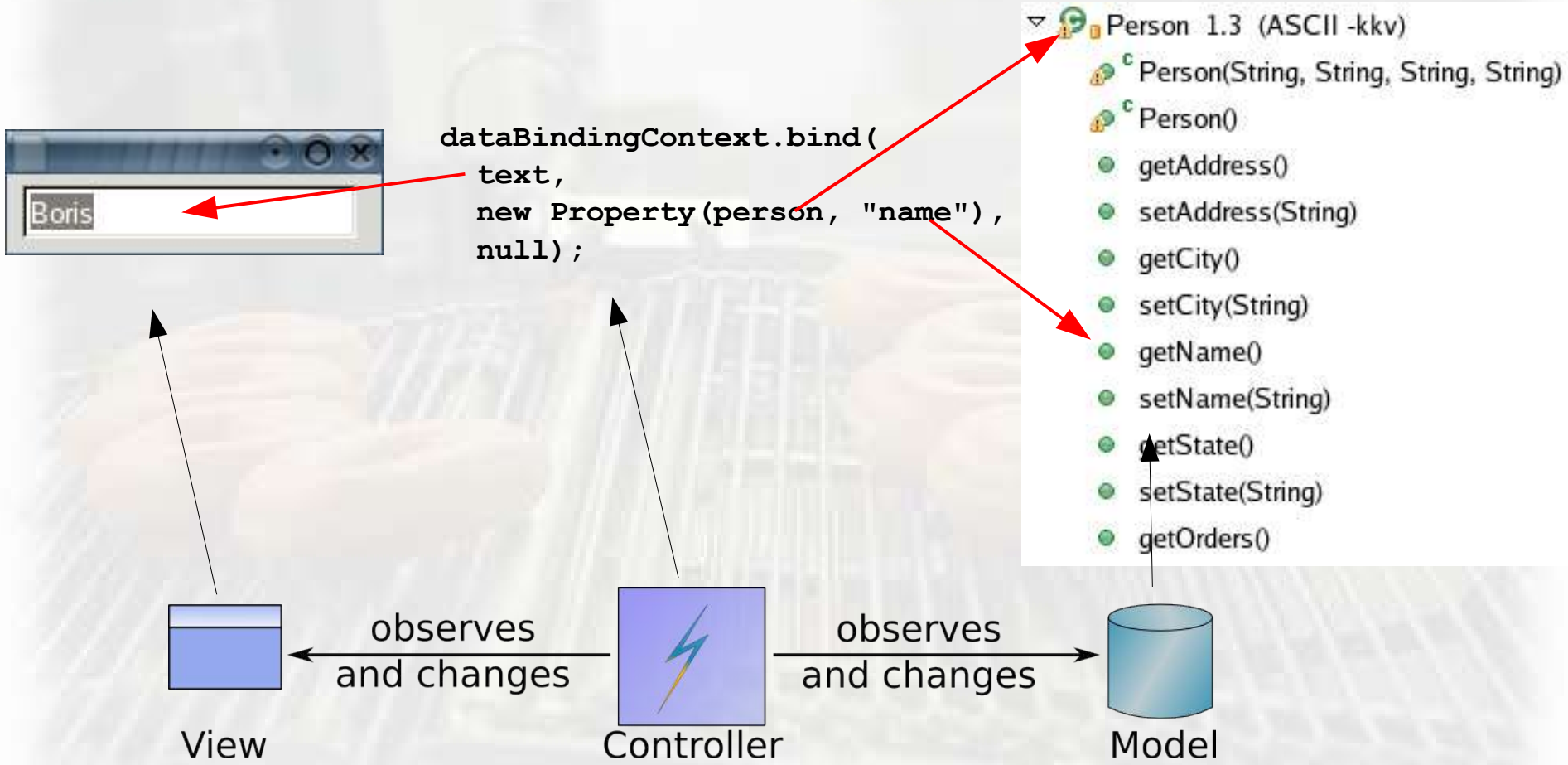


What is Krispy Kreme?

- Improves and updates Model-View-Controller
 1. Model the data flow directly
 2. Convert and validate data automatically / as necessary



Getting Started with Krispy Kreme



Getting Started with Krispy Kreme

```
// Make SWT Text control
Text text = new Text(shell, SWT.BORDER);

// Make Person (domain model) object
Person person = new Person("Boris",
    "2670 Queensview Dr", "Ottawa",
    "Canada");

// Bind the Person's name to the SWT Text
DataBindingContext dbc =
    BindingFactory.createContext(shell);

dbc.bind(
    text,
    new Property(person, "name"),
    null);
```



```
Person 1.3 (ASCII -kkv)
  Person(String, String, String, String)
  Person()
  getAddress()
  setAddress(String)
  getCity()
  setCity(String)
  getName()
  setName(String)
  getState()
  setState(String)
  getOrders()
```


Extending and customizing Krispy Kreme

- *DataBindingContext methods*
 - *Listen to binding events*
 - *Modify data flow behavior*
 - *Attach global validators*
- *BindSpec parameters*
 - *Change local validation*
 - *Change local data type conversion*
- *Extend the type hierarchy*

```
dataBindingContext.bind(  
    text,  
    new Property(person, "name"),  
    null);
```

Krispy Kreme:

- Is Tasty 😊
- Helps automate your user interface development
- Is compatible with existing Java standards
- Can be extended to bind to and from anything
- ***The bottom line: With Krispy Kreme you deliver Eclipse RCP applications faster, more easily, with fewer defects.***

Questions?

- **To learn more:**
 - http://wiki.eclipse.org/index.php/JFace_Data_Binding
 - **Post to `eclipse.platform.rcp` with `[DataBinding]` in subject**
- **Thanks to the following kind folks on Flickr for releasing their Krispy Kreme photos/video under a CC license:**
 - <http://flickr.com/photos/pochacco20/59141976/>
 - <http://flickr.com/photos/francois/3959737/>
 - <http://flickr.com/photos/roboppy/10023293/>
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