



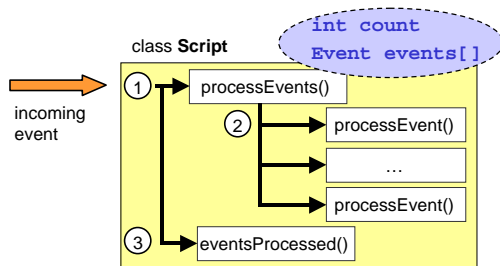
VRML Script & Java

- Java classes for Script
- Event processing
- class Browser

Java functions for Script node

- all implemented in a class with the name referenced in Script's *url*
- functions `initialize()`, `shutdown()`
- access to distant nodes
- access to a browser
- throw and process exceptions

Event processing in class Script



Event parsing

```
Script { eventIn SFBool touched
         eventIn SFVec3f touch_point
         eventOut SFTime startTime
         url "Example1.class"
}
```

.wrl

```
public class Example1 extends Script {
  ...
  public void processEvent(Event e){
    if(e.getName().equals("touched")){
      ConstSFBool v = (ConstSFBool)e.getValue();
      if(v.getValue()==true){
        startTime.setValue(e.getTimeStamp());
      }
    }
  }
}
```

.java

class Event

```
public class Event implements Cloneable
{
  public String getName();
  public double getTimeStamp();
  public ConstField getValue();
  public Object clone();
  public String toString();
}
```

Access to Script's fields

```
Field getField(String fieldName)
  // read,write

Field getEventOut(String eventOutName)
  // read last value
  // write ==> new event generated

Field getEventIn(String eventInName)
  // write ==> send event to itself
```

Manipulation with fields

SFxxx:

- `getValue()` // VRML -> Java
- `setValue(value)` // Java -> VRML

MFxxx:

+ `toString()` as usually...

- `getSize(), get1Value(int index)`
- `set1Value(int index, value)`
- `insertValue(int index, value)`
- `addValue(value)`
- `clear(), delete(int index)`

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Access to distant nodes

Functions `getEventOut, getEventIn`
similarly as for own Script node

+
class Node

```
Field  getExposedField(String exposedFieldName)
String getType() // e.g "Sphere"
Browser getBrowser() // access to a browser
String toString()
```

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class Browser

The same functionality as ECMAScript
object Browser

```
private Browser browser; // declaration
...
public void initialize() {
    browser = this.getBrowser();
    browser.setDescription("Hurray");
}
```

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End of this part

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