

# TrackDraw



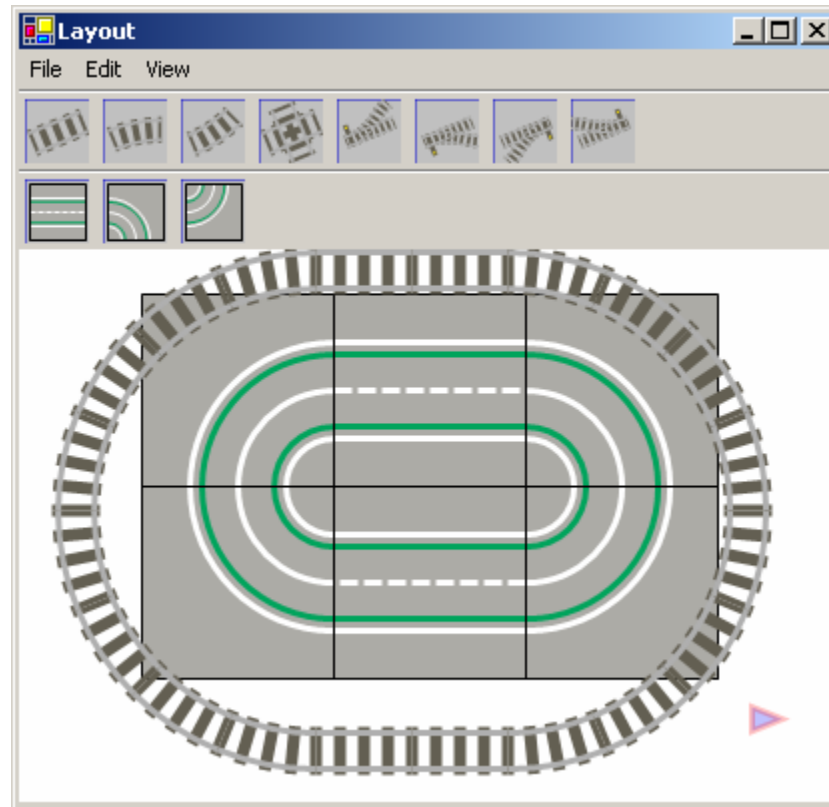
**BrickFest 2003**

Trains

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August 9<sup>th</sup> at 11:00 am

# Demo





# Layout

```
<?xml version="1.0" encoding="utf-8" standalone="yes"?>
<trackdraw xmlns="urn:layout">
  <layout class="9V track">
    <part name="straight" x="0" y="0" repeat="4" />
    <part name="curve" connection="2" repeat="8" />
    <part name="straight" repeat="4" />
    <part name="curve" connection="2" repeat="8" />
  </layout>
</trackdraw>
```



## Colors

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```
<defs system="LEGO" >
```

```
<colors selected-offset="#FF000040" >
```

```
<color name="black" id="0" rgb="#000000"/>
```

```
<color name="blue" id="1" rgb="#0067a7" />
```

# Toolbars

```
<toolbar class="9V track" unit-width="32"  
  unit-height="32" background-color="#c0c0c0">
```

Train 9V

```
<button name="straight" key="s">
```

(s) 9V straight

```
</button>
```

```
<button name="curve" key="r">
```

(r) 9V curve right

```
</button>
```

# XML Parts

```
<part class="9V track" id="2865"  
      name="straight">
```

9V Straight

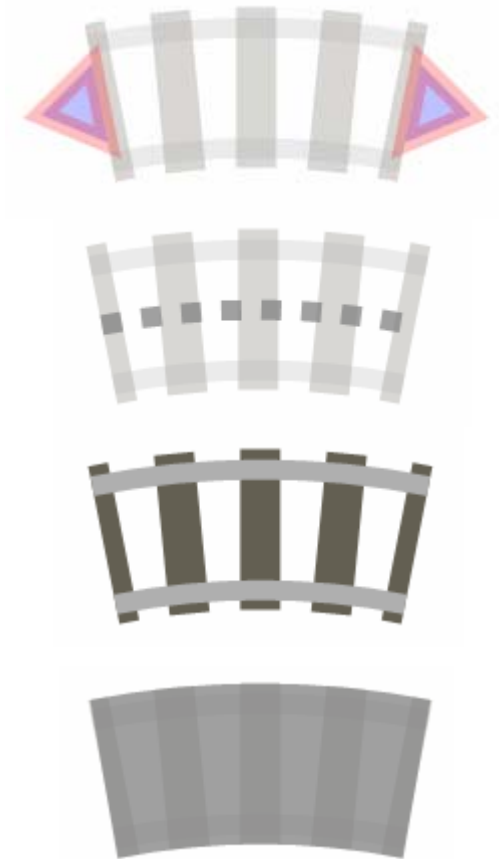
```
<connection ... /> ...
```

```
<motion> ... </motion>
```

```
<draw> ... </draw>
```

```
<hit-test> ... </hit-test>
```

```
</part>
```



# Connections

```
<connection x="-8" y="0" angle="180"  
  symmetry-id="1" />
```

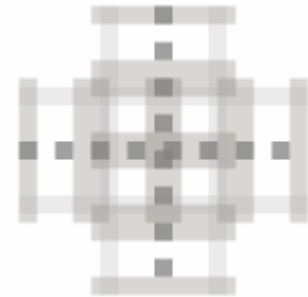
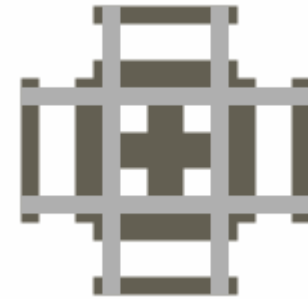
```
<connection x="8" y="0" angle="0"  
  symmetry-id="1" />
```

- Other attributes: other-end="1"



# Motion

```
<motion>  
  <switch> ... </switch>  
  <group> ... </group>  
  <line ... />  
  <arc ... />  
</motion>
```



# Draw Components

<draw>

<switch> ... </switch>

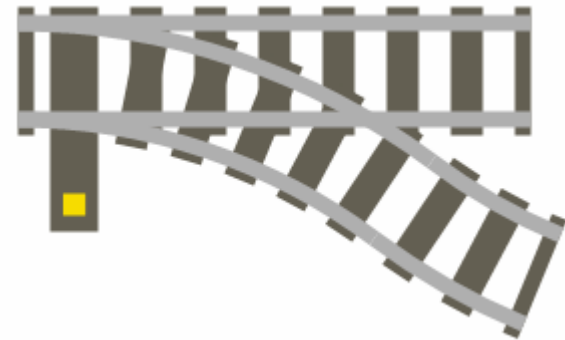
<group> ... </group>

<color> ... </color>

<pen> ... </pen>

<line /> <arc /> <rectangle />

</draw>



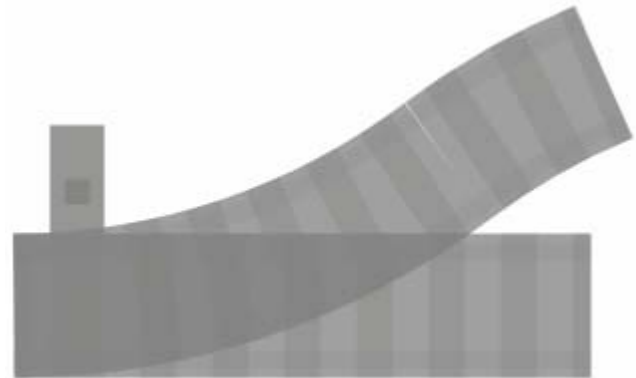
# 9V Straight Draw

```
<draw>  
  <color rgb="darkGray">  
    <rectangle left="-8" top="-4" width="1" height="8" />  
    <rectangle left="-5" top="-4" width="2" height="8" />  
    <rectangle left="-1" top="-4" width="2" height="8" />  
    <rectangle left="3" top="-4" width="2" height="8" />  
    <rectangle left="7" top="-4" width="1" height="8" />  
  </color>  
  <color rgb="metal">  
    <line x1="-8" y1="-3" x2="8" y2="-3" />  
    <line x1="-8" y1="3" x2="8" y2="3" />  
  </color>  
</draw>
```



# Hit Test

```
<hit-test>  
  <switch> ... </switch>  
  <group> ... </group>  
  <pen> ... </pen>  
  <arc/> <line/> <rectangle />  
</hit-test>
```





# Menus

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- File: New layout, new parts viewer
- Open .xml, .dat (LDraw track models)
- Save as .xml, .dat, .svg, .bmp, .jpeg, .png
- Page Setup, Print Preview, Print
- Edit: Undo / Redo; Cut / Copy / Paste
- Delete; Select All
- View: Dynamic toolbars



# Editing by Mouse

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- Drag and Drop
- Free Rotate
- Inclusive Selection
- Exclusive Selection
- Extend Selection
- Add / Paste Point
- Anchors (undone)



# Editing by Keyboard

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- TAB alternates choice
- SPACE repeats choice
- Numbers specify repeat count
- BACKSPACE deletes one piece
- DELETE deletes selection
- ESC cancels repeat, etc.
- HOME centers layout (undone)



# Development

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- C#
- .NET
- GDI+
- Windows
- XML
- XML Schema



## More Things To Do

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- Z and Shadows (for monorail)
- Parts Editor, at least tables, buildings
- Polygons / Polylines / Paths
- Electrical Check
- Gridding
- Global Copy / Paste
- Import Track Designer



# Things Not To Do

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- 3D
- Photo Realism
- OS Independence
- Flextrack
- LDraw Parts Import (at least, not all)



# Thank you

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## Any Questions?

Email me at: [cary@corp.webtv.net](mailto:cary@corp.webtv.net)

Please include TrackDraw in the subject line.

Latest status: <http://www.trackdraw.com>