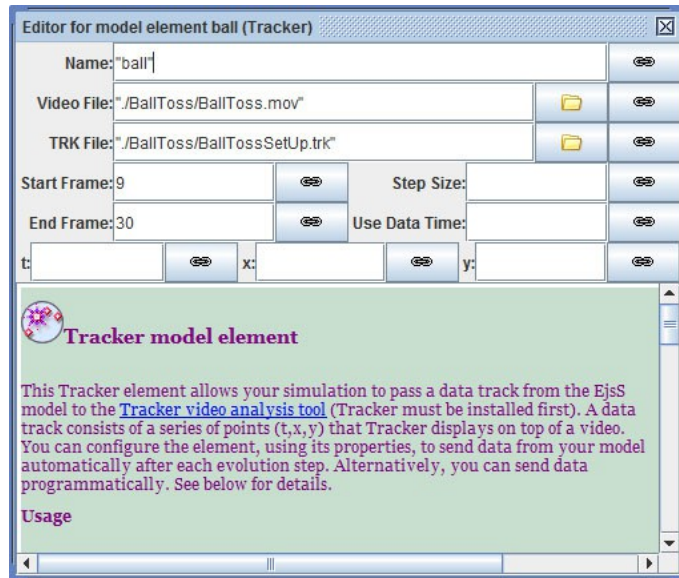# EjsS Tracker Elements
Sending EjsS data to Tracker

- *In EjsS: Tracker element*
- *In Tracker: data track (automatic)*
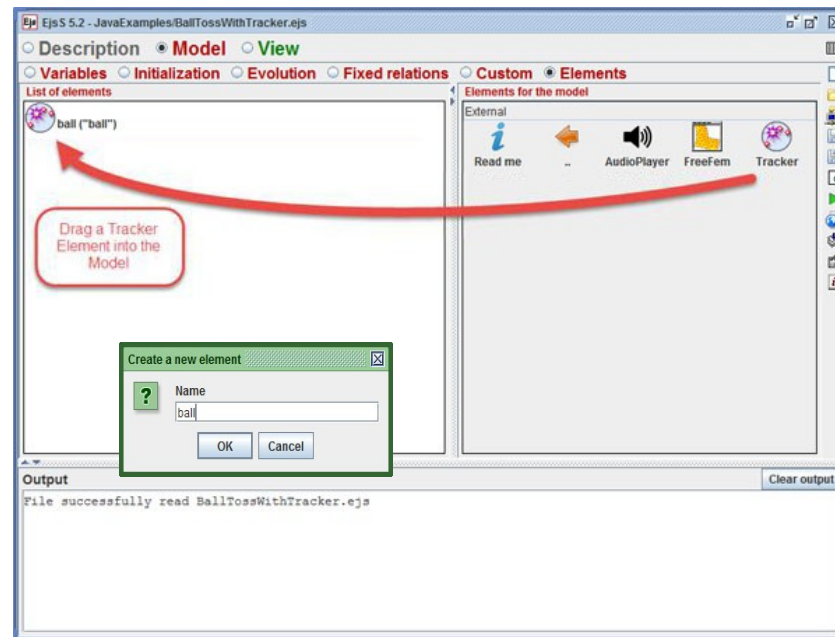
Useful resources:

[Tracker Help: data track](#)

EjsS example: Ball Toss with Tracker

EjsS Tracker Elements
Create Tracker Element in EjsS

- *Model Elements page*
- *External models*
- *Drag icon to create element*
- *Assign a name to the element—in this case "ball"*

EjsS Tracker Elements

Enter a name for the data track

- *Dbl-click the element to open property editor*
- *Name must be in quotes—here "ball"*
- *Name is assigned to the data track in Tracker*
- *Name may be same as element name*
- *Other properties will be set later*

EjsS Tracker Elements
Append initial data to element

Init Page:
```
//set initial conditions
t=0;
x=x0;
y=y0;
vx=vx0;
vy=vy0;

ball.append(t,x,y);  // send first data point to Tracker
```
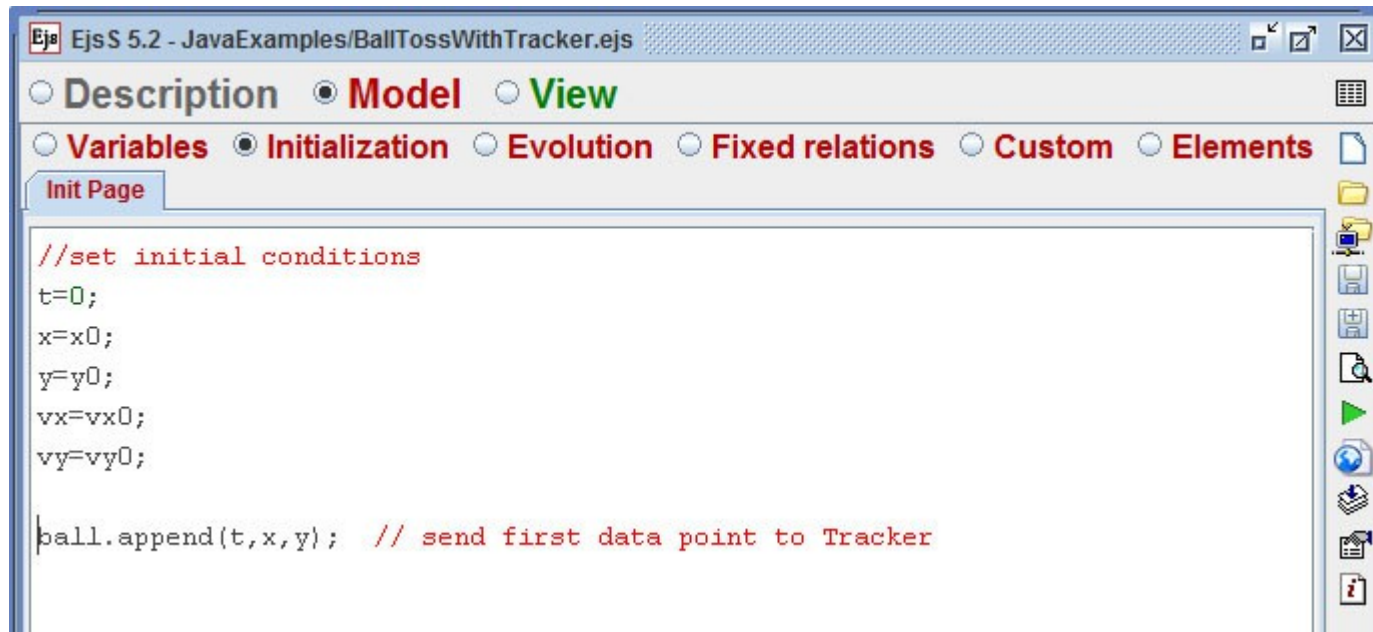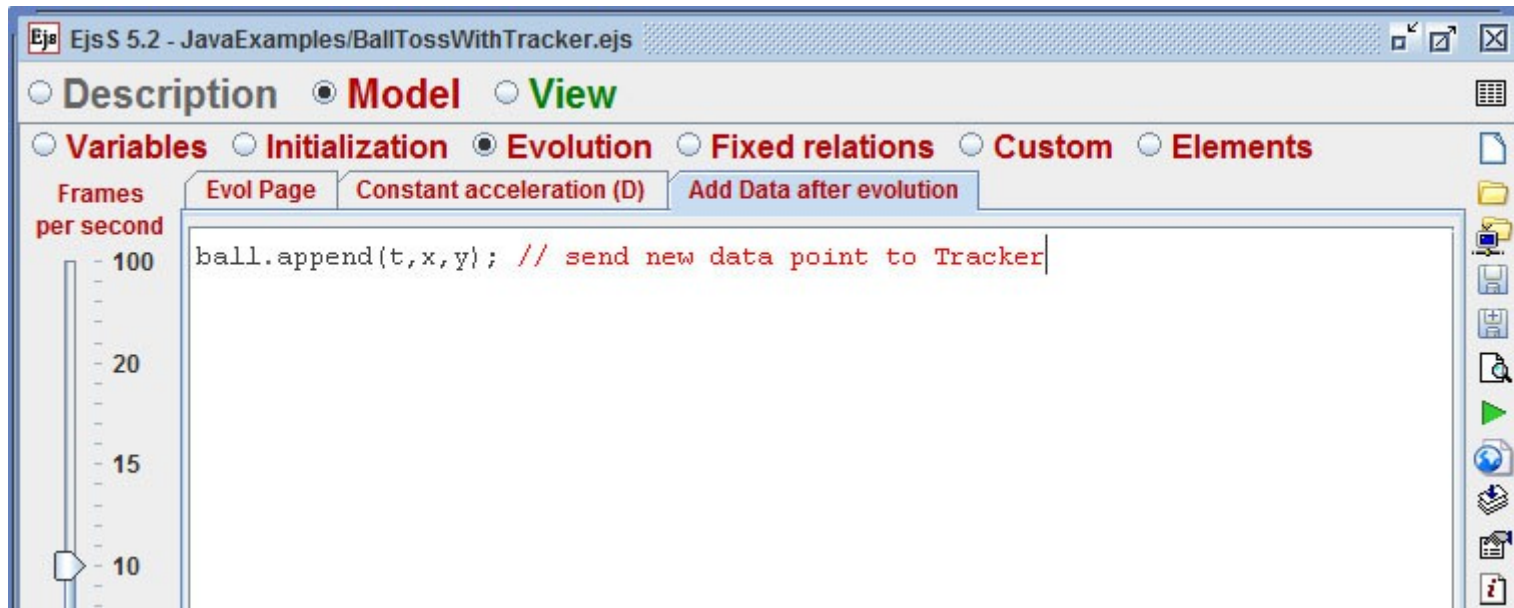
- *Click to add new page in Initialization if needed*
- *Call method append(t, x, y) on element "ball"*

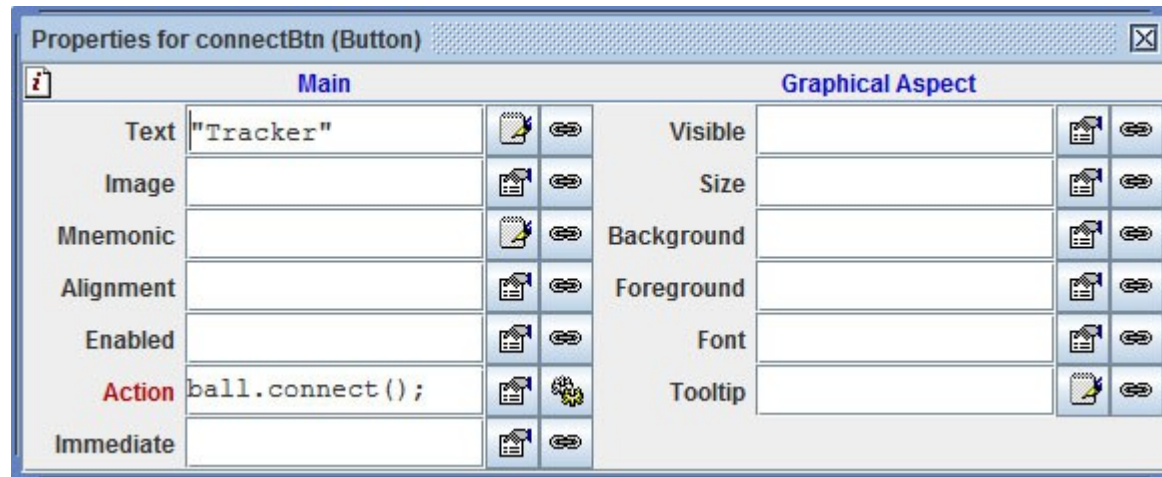# EjsS Tracker Elements
Append data to element after ODE step

Right-click to add new page in Model/Evolution

Call method append(t, x, y) on element "ball"

EjsS Tracker Elements
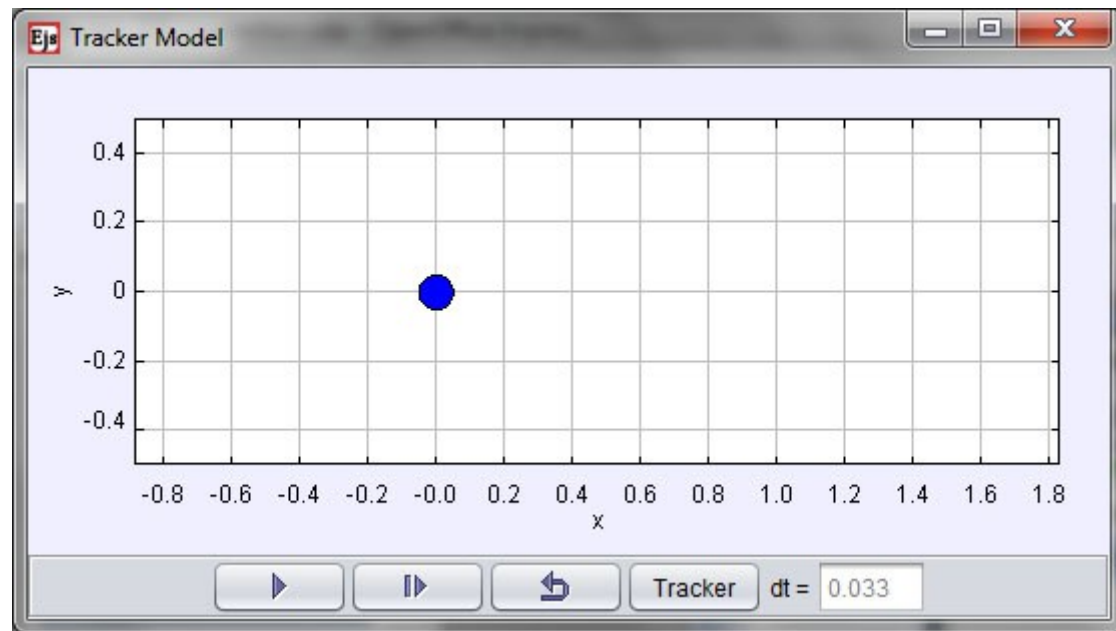## *Add button to connect to Tracker*

- *Create button in View page by dragging to a panel*
- *Dbl-click button to open property editor*
- *Button Text must be in quotes*
- *Button Action is connect() method*
- *Call connect() method on element "ball"*

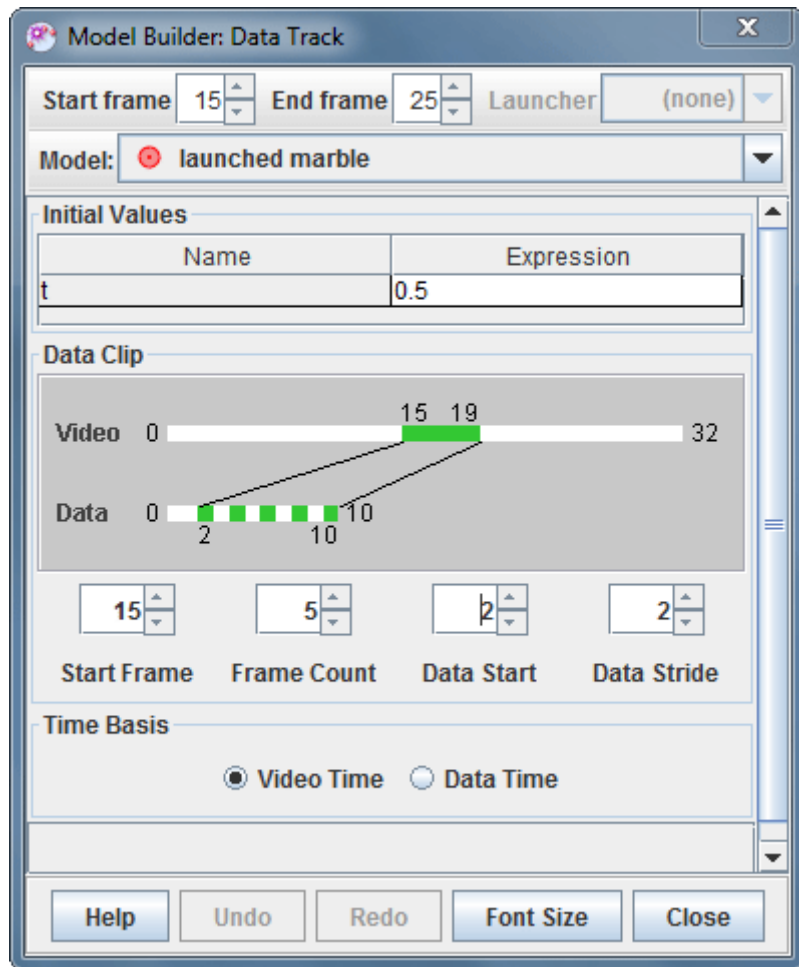# EjsS Tracker Elements
Initial testing

- *Connect button should create a data track in Tracker*
- *Step forward button should append data*
- *Play button should append more data*
- *Reset button should reset data track*

EjsS Tracker Elements
Data track settings

- *Video start frame*
- *Frame count*
- *Data start index*
- *Data stride*
- *Time basis*
- *Set in model builder*

EjsS Tracker Elements

Comparing data tracks with videos

Video
- *Calibrate scale*
- *Set origin, adjust angle*
- *Set clip start to first frame of interest*
- *Set frame rate or frame dt*
- *Set other clip properties if desired*

Track
- *Set properties in model builder*

EjsS Tracker Elements
Saving video settings in TRK file

- *Delete the data track before saving*
- *Save TRK file with same or similar name to EjsS model/element*
- *Undo in Tracker to restore data track if desired*

EjsS Tracker Elements
Using TRK and video in EjsS tracker element

Editor for model element ball (Tracker)

Name: "ball"

Video File:

TRK File: "./BallToss/BallTossSetUp.trk"

Start Frame: 9   Step Size:

End Frame: 30   Use Data Time:

t: x: y:

- *Copy both TRK file and video to EjsS source folder*
- *Check that copied TRK opens video*
- *Open tracker element in EjsS*
- *Use "open" button to set TRK file path*
- *Copy data track settings to EjsS element*
- *No need to enter video file path when using TRK*

EjsS Tracker Elements
Final testing
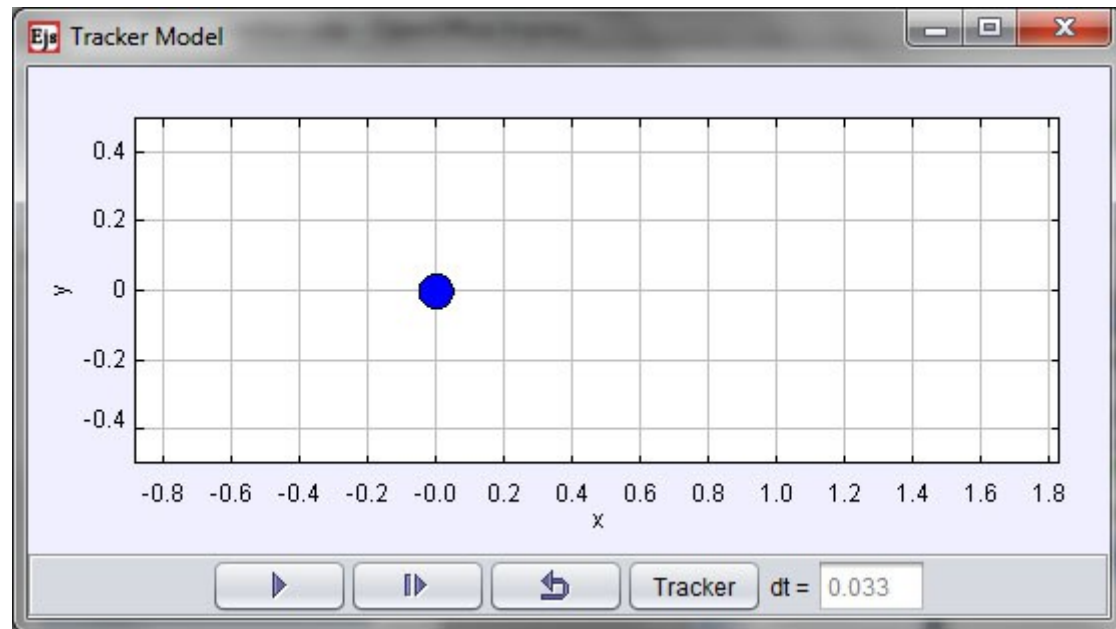
- *Connect button should open the calibrated video and create the data track*
- *Other buttons as before*