Results of testing PhET simulations on Macintosh

(cmalley, 12/13/2005)

TEST SYSTEM:
OS 10.3.7
Apple Java 1.4.2_05

NO OBVIOUS PROBLEMS:
These simulations has no obvious problems, but all functionality was not thoroughly tested.

Battery Voltage
Blackbody Spectrum
Charges and Fields
Color Vision
Discharge Lamps
Equation Grapher
Estimation
Faraday's Electromagnetic Lab
Fourier: Making Waves
Friction
Gas Properties
Greenhouse Effect
Lasers
Masses & Springs
Moving Man
Ohm's Law
Optical Quantum Control
Projectile Motion
Reversible Reactions
Resistance in a Wire
Travoltage
Vector Addition
Wave on a String

TITLE PROBLEMS:

These simulations had an inconsistency in their title. The title can appear in 3 places: on the website, in the JNLP file, and in the simulation itself. This is not a Mac-specific problem.

Balloons & Buoyancy:
JNLP file calls it "Physical Chemistry"

Battery-Resistor Circuit:
Sim calls itself "Ohmic PhETlet".

Conservation of Energy:
Website identifies the title as "Conservation of Energy",
Webstart calls it "Conservation of Energy Toolkit",
Simulations calls itself "nRg Sk8r".
Version is 0.1 (what is a 0.x version doing on the website?)

Electric Field Hockey:
JNLP and sim use title "Electric Hockey".

Semiconductors:
JNLP file calls it "Semiconductors and doping".

COSMETIC PROBLEMS:

These simulations had cosmetic problems that are distracting, but don't cause any features to be unusable. Cosmetic issues detract from the perceived quality of the simulations. The most common problem was that programmers forgot to call JButton.setOpaque(false) for all buttons that are on a non-default background. Other cosmetic issues were related to layout.

CCK:
Some controls are unreadable because labels are truncated

Conductivity:
Battery graphic is messed up.
Weird graphic appears in "photoconductor" mode.

Electric Field Hockey:
All button have a white rectangle background - setOpaque(false).

Electric Field of Dreams:
JNLP and app call this "Electric Field".

Geometric Optics:
Right edge of some control labels is truncated.

Microwaves:
Uses multiline tab labels, which don't work on Mac.
Buttons in control panel have a gray rectangle background - setOpaque(false).

Motion 2D:
"Drag Me" wiggle me doesn't point at the object to drag.
"More controls" button has a white rectangle background - setOpaque(false).

Radio Waves:
All button have a gray rectangle background - setOpaque(false).

Self-Driven Particle Model:
All button have a gray rectangle background - setOpaque(false).

Semiconductors:
Problem with layout of Swing components in play area.
Control panel buttons have a gray rectangle background - setOpaque(false).

Sound:
Multiline tab labels don't work on Mac.
Strange tick marks on "Wall Angle" and "Wall Position" sliders.
Buttons on the stop watch have a white rectangle background - setOpaque(false).

MINOR PROBLEMS:

These simulations had minor problems that made it difficult, but not impossible, to use some features of the simulations.

Electric Field of Dreams:
Slider for field discreteness doesn't work, has redraw problems.

The Ramp:
"Choose Object" menu in "More Features" panel does not display choices properly.
Close all graphs to see a layout problem with buttons.

MAJOR PROBLEMS:

These simulations had major problems that made it impossible to use one or more features.

Balloons and Static Electricity:
None of the controls at the bottom of the window are visible. If you resize the window, you can briefly see them.

Forces 1D:
Nothing appears in the play area.

Maze Game:
Game doesn't appear to work, nothing happens in "Arena of Pain".
All buttons have a white rectangle background - setOpaque(false).

Nuclear Physics:
Energy Graphs window is blank.
Menubar does not appear.

Photoelectric Effect:
Graphs don't draw correctly.
Graph window can't be moved.

Quantum Wave Interference:
"High Intensity" panel has an empty play area.
"Single Particles" panel has layout problems in play area.
Menubar does not appear.

Signal Circuit:
Doesn't work, no electrons shown.