

Node and Arc Interface Training

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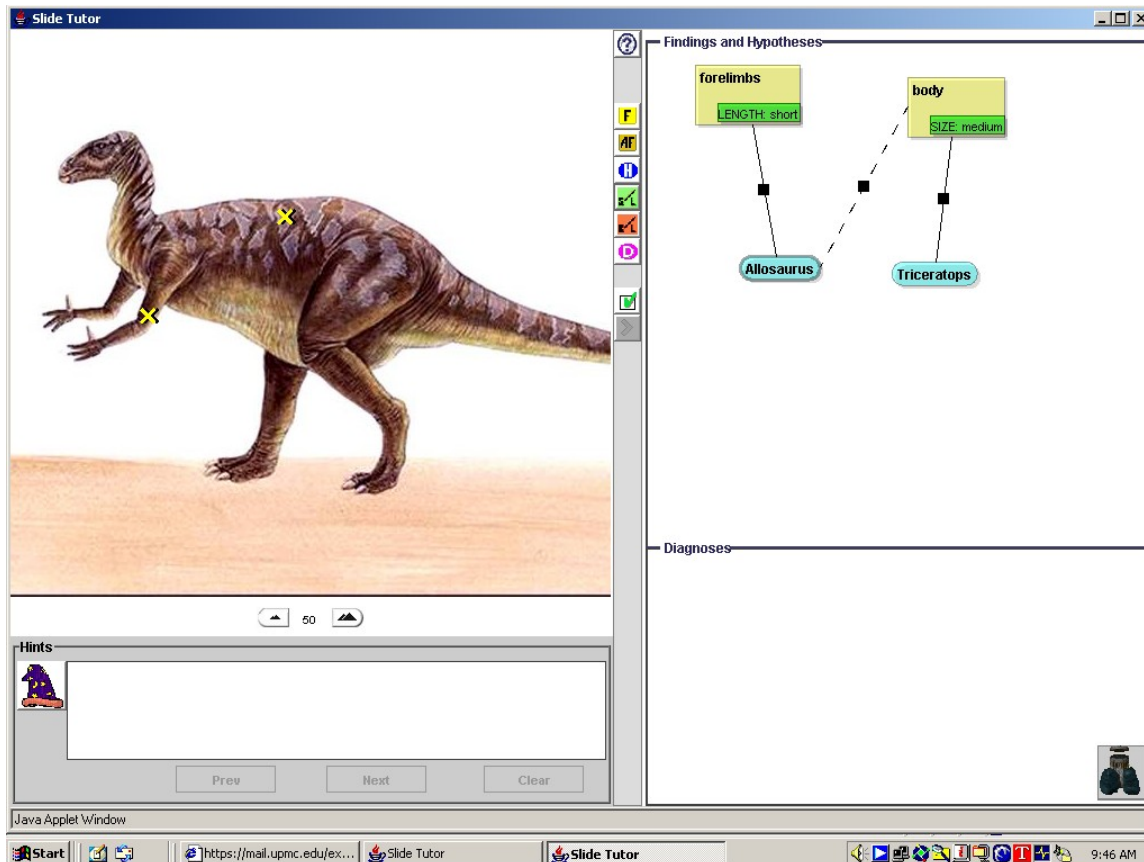
Node and Arc Interface Training

Introduction

The system you will be working with today is an intelligent tutoring system. Intelligent tutoring systems are adaptive, instructional systems that try to mimic the well-known benefits of one-on-one tutoring. The system steps you through the diagnostic process, and helps you know when you are right or wrong by providing feedback. It keeps track of what has been done and what still needs to be done. The system is interactive with the user, providing smart advice about what the best steps are. An important feature of this kind of system is the ability to ask for hints at any time if you are unsure what you should be doing.

The purpose of this particular system is to help users learn about the pathology of skin disease. The tutor is not fully developed. It teaches only a particular area of inflammatory diseases – it does not know about all inflammatory diseases, but knows about a subpart of inflammatory diseases and shows how to learn those.

In this system, users are presented with “virtual slides” and the goal is to create a diagnosis. To do this, you can locate findings and assert hypotheses. You can draw links between findings and hypotheses that indicate they go together (support links) or they do not go together (refute links). This system is very open-ended and allows users to do things in the order they want. Hints will however guide the user to do things in the most efficient order, working your way from findings up to asserting hypotheses and making diagnoses. The screenshot below illustrates a case in progress. The yellow boxes indicate present findings, and the blue ovals indicate hypotheses. The boxes and ovals are referred to as “nodes”.




Using the Virtual Microscope

SlideTutor incorporates a virtual microscope which has the same functionalities as a regular microscope, but is obviously operated differently.

To move around slide:

Press and hold left mouse button. Drag mouse. Release left mouse button. Repeat as needed until you are viewing what you want to view.

To zoom in:

Click the  button OR right click the mouse over the image.

To zoom out:

Click the  button OR hold down the Ctrl key and right click the mouse over the image.

Toolbar Buttons

Present Findings

One of the most important steps to making a diagnosis is identifying features that are present.

To indicate the presence of a finding:

1. Left click the **F** button
2. Left click the finding in the image to place an X indicating the location of the finding
3. Select the appropriate finding from the menu tree that appears.

To describe findings:

1. Right click the finding node.
2. Select “Describe Qualities” from the popup menu
3. Select the appropriate description from the menu tree that appears.

Absent Findings

Sometimes the absence of a finding is just as important in making a diagnosis as present findings.

To indicate that a finding is absent:

1. Left click the **AF** button.
2. Select the appropriate absent finding from the menu tree that appears.

Absent findings that you have identified display with a red X to distinguish them from present findings.

Hypotheses

As you are working through cases, it is useful to assert hypotheses that you are considering.



To assert a hypothesis:

1. Left click the **H** button
2. Select the appropriate hypothesis from the menu tree that appears.

Drawing support and refute links

Drawing support and refute links between evidence and hypotheses is helpful in keeping your thoughts (and screen!) organized.

To draw a support or refute link:


1. Left click the support link () or refute link () button
2. Left press the mouse over the finding
3. Drag the mouse to the hypothesis. You will see a line being drawn
4. Release the mouse button

An important thing to note about this program is that it allows users to hypothesize early on, and links can be drawn between findings that do not have any qualities added. If a quality is added later on that now makes the link between the finding and hypothesis incorrect, the user will be told that they have to reconsider that hypothesis.


Making a diagnosis

The ultimate goal of any case is to make a diagnosis.


To make a diagnosis:

1. Left click the  button
2. Select your diagnosis


Done button

Once you are done working through a case, you can click the  button. The tutor will inform you that you are not done with a case if you have not worked through it entirely. After you are done, you can still use the tutor to review the slide or test other hypotheses by adding diseases and using support and refute links.

Next Problem button

When you are ready to move on, you can advance to the next case by clicking the  button. This button will only work once the problem you are working on has been completed.


Help button

If at any time you want to see what the toolbar buttons do, left click the  button. It provides a description of all the icons.

Asking for hints

An important feature of SlideTutor is the ability to ask for hints when you are unsure of what to do next.

To ask for a sequence of hints:

1. Left press the  button
2. Use the Next and Prev buttons to get more hints or to go back to a hint earlier in the sequence

When you are not sure what to do next - asking for hints is a good way to make progress - because hints will help move you along towards completing the case.

Menus

When locating findings and absent findings, describing qualities, and asserting hypotheses, options are selected from a menu tree that pops up.

Locating Items in the Menu Tree

There are two ways in which you can locate items in the menu trees: opening and closing the tree, or typing in a string to search for in the tree. To expand the tree, simply left click a “branch” of the tree to highlight it, and that branch will open up and display its contents. To open another branch, simply highlight that branch.

Alternatively, you can have the program search the tree for a particular string of letters by typing in a string and clicking the “Go” button. The tree will display any items containing that string. To go back to the original view of the tree, left click the “Reset” button.

Selecting an Item from the Menu Tree

Once you locate the item you are looking for in the menu tree, single click the item to highlight it, and click “Select”. Even if the item appears to be highlighted (from using the search tool), you still need to single click it first to be able to select it.

Tutor Error Message

Occasionally, the tutor may malfunction. If it does, you will see an alert message which directs you to inform the instructor. Please get the instructor’s attention if this happens.

Frequently Asked Questions

How do I delete things?

You can delete findings, hypotheses, links, and diagnoses in one of two ways:

1. Right click the object you wish to delete and select “Delete”
2. Drag the object you wish to delete to the trashcan*

*Note that the trashcan cannot be used for deleting links. Those must be deleted by right clicking them.

Why can't I delete my present finding?

Once you correctly indicate a present finding, you cannot delete it. You can delete absent findings, hypotheses, support and refute links, and diagnoses. You can also always delete anything that is incorrect.

How do I qualify findings?

The tutor allows you to describe the qualities of findings. Simply right click the finding box, select “Describe Qualities” from the popup menu, and go through the options and select the appropriate description.

What if I misplace my yellow finding X? Can I move it?

If you place your finding X in the wrong part of the image, you have several options. You can cancel out of the action by clicking cancel in the popup menu window. Alternatively, you can still select your finding from the menu. The tutor will turn your X red and an alert message will appear. After closing the alert window, you can move the X by holding down the left mouse button and dragging the X to the correct location on the slide.

How do I get additional information about findings and hypotheses on my screen?

If you right click a finding, hypothesis, or diagnosis and select “Glossary”, a popup window will appear that provides additional information about that concept.

How do I rearrange the nodes on my screen?

At any time, you can move nodes around and reorganize your screen. Simply left press the mouse and drag nodes around as desired.

What are alert messages?

When you do something that is incorrect, an alert message pops up telling you that what you have done is wrong. These messages are important in helping you learn and keeping you on the right track in working through cases.

Why has my finding/hypothesis/link changed color?

After an incorrect action and an alert message appears on your screen, whatever is incorrect will turn red.


Why didn't the tutor accept my support/refute link?

For the tutor to accept links, you must be careful to begin and end your link when your mouse is inside the nodes.

Why aren't there any choices to select when I click the diagnosis button?

When the diagnosis window appears, your choices will be all the hypotheses you have currently asserted. You must assert a hypothesis before you can make a diagnosis.

How do I move on to the next case?

To move on to the next case, simply left click the  button and the tutor will advance to the next case.

Why won't the tutor let me move on to the next case?

The tutor will not allow users to move on to the next case until they have completely worked through the current case. You cannot skip cases.

Additional Questions?

If you have any additional questions that are not answered in this packet, please ask the instructor for assistance.