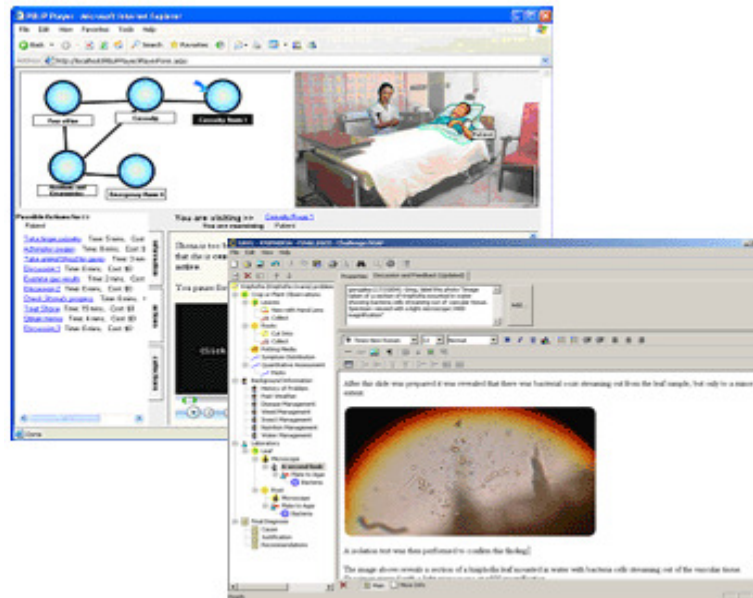


What's wrong with this picture? - Constructing and delivering problem- based scenarios for student exploration





Background to the Project

- The Diagnosis Story
 - How to give plant protection students a diagnostic experience?
 - 1990 – Diagnosis (MSDOS)

```
You are standing in an apple orchard in the Waikato. Most of the 4 - 5 year old trees here appear small and unthrifty. It is close to harvest, but the few small fruit these sick trees have produced litter the weedy ground.
```

```
From your conversations with the grower, it seems the plants have never done well, but this year has been particularly bad.
```

```
As you walk through the affected block, you notice the most pathetic specimens lie in the low areas. You stop in front of one particularly unhealthy tree for a closer examination.
```

```
An almost bankrupt grower is here with you.
```

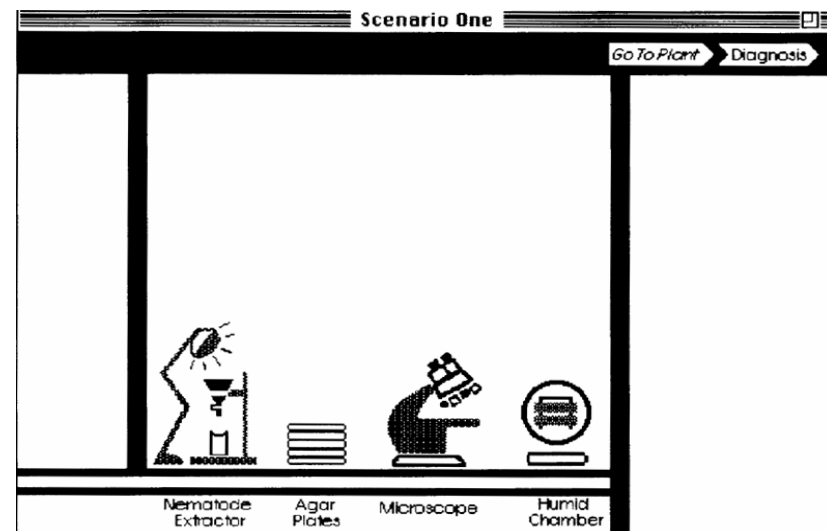
```
<----->
```

```
Many of the remaining leaves are small, highly coloured and in an advanced state of chlorosis or necrosis. You examine a few with a hand lens but there are no signs of pests or pathogens on the surface.
```

```
What will you do next?  examine roots_
```

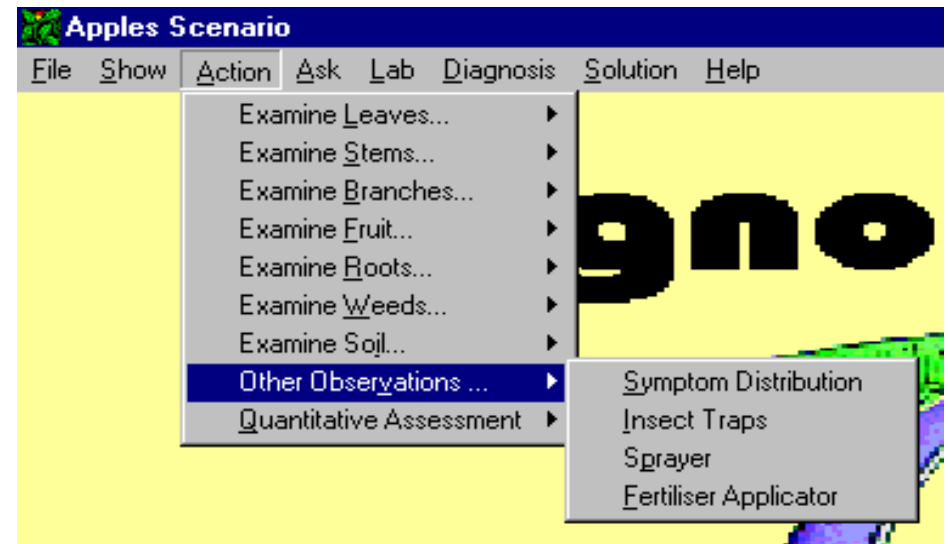
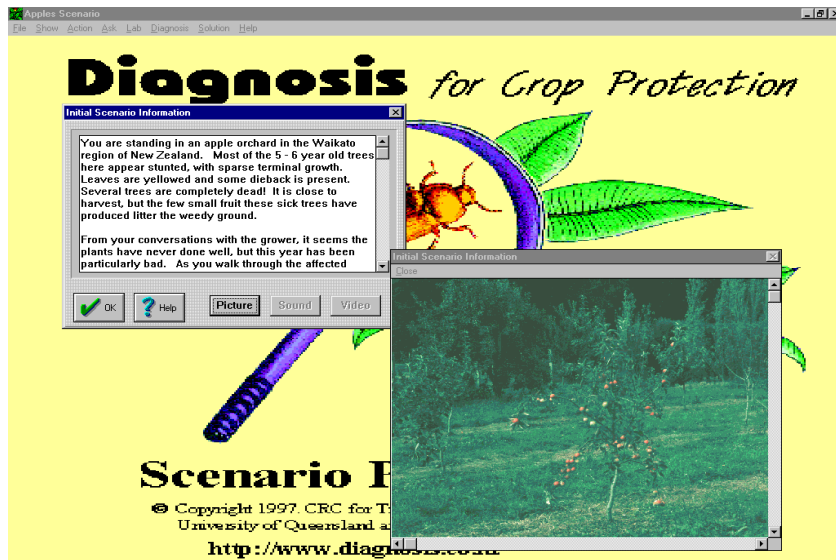
Background to the Project

- The Diagnosis Story (cont...)
 - 1992 - The Mac Manifestation



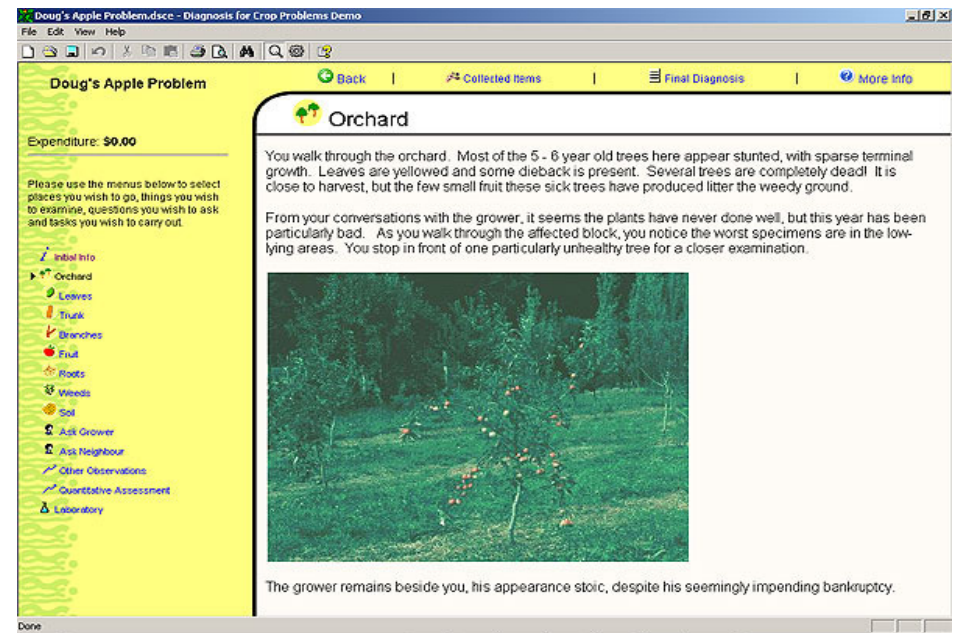
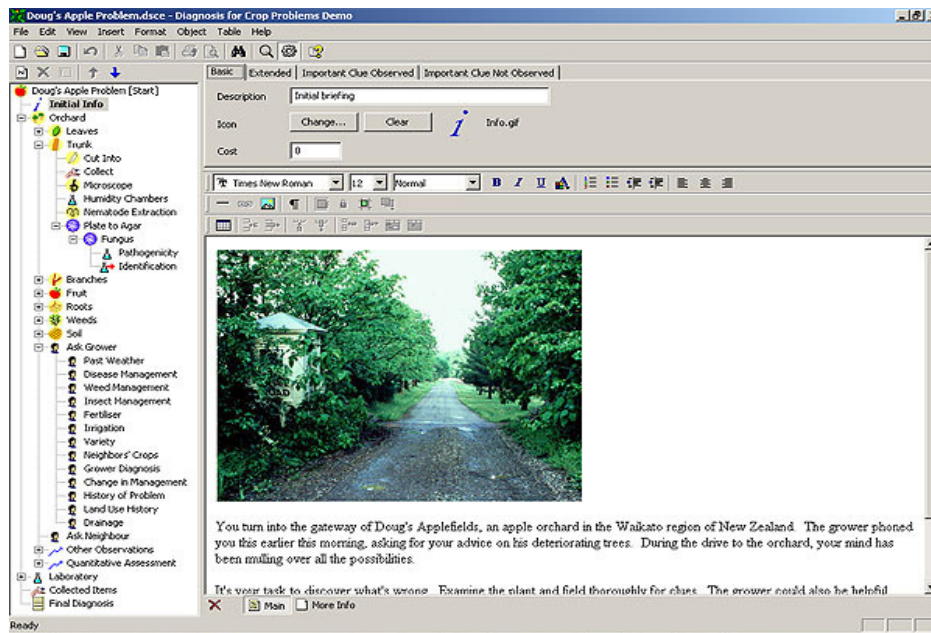
Background to the Project

- The Diagnosis Story (cont...)
 - The University of Queensland connection
 - 1993 - Diagnosis for Crop Protection (Win 3.1)



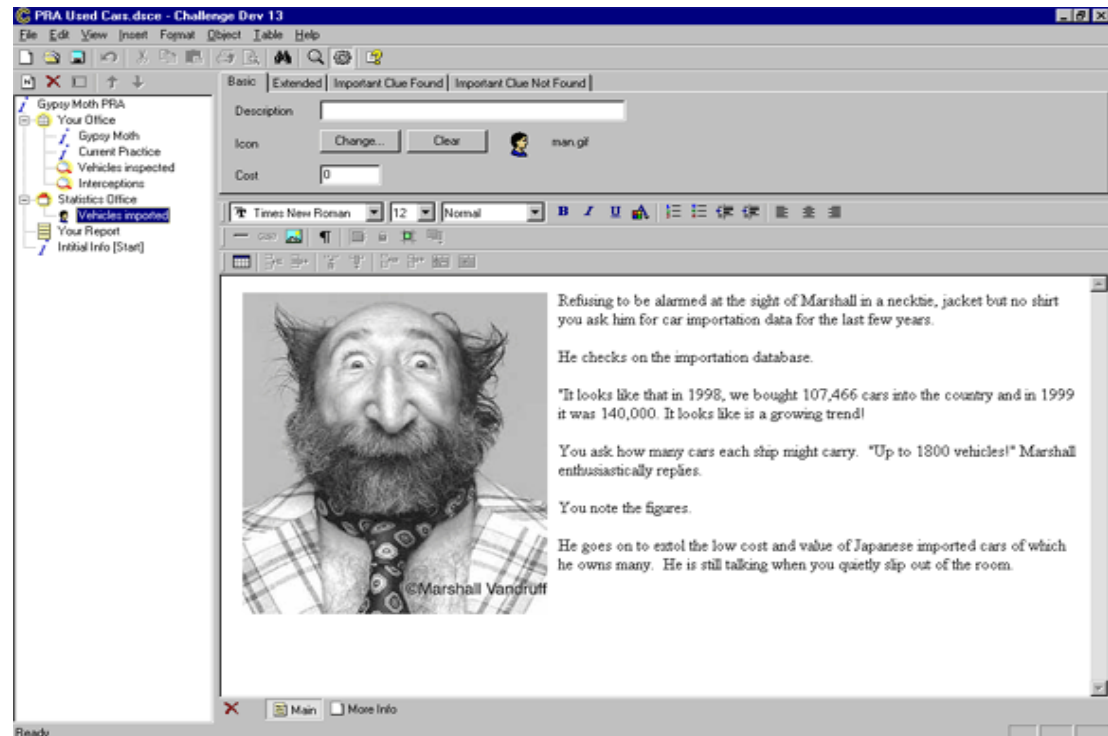
Background to the Project

- The Diagnosis Story (cont...)
 - 2001 - Diagnosis for Crop Problems



Background to the Project

- A new Phase... Challenge
 - 2002 – Challenge Player/Builder





Background to the Project

- Problems with CHALLENGE
 - Player was Client-Based, so scenarios could not be explored over the Internet
 - No way to ensure once-only pass-through of a scenario by distance students
 - Needed support materials (icons, guides to storyboarding a scenario etc.)
 - Needed example scenarios

Background to the Project

- Meanwhile CBIT, UQ had developed PBL-Interactive
 - Server-based player
 - Improved Interface
 - Improved pre-requisite functionality

The screenshot shows a web browser window titled "PBL-IP Player - Microsoft Internet Explorer". The address bar displays "http://localhost/PBLIPPlayer/PlayerForm.aspx". The main content area is divided into several sections:

- Navigation Diagram:** A network of five blue circular nodes connected by lines. The nodes are labeled: "Your office", "Casualty", "Casualty Room 1", "Accident and Emergency", and "Emergency Room 4". A blue arrow points to the "Casualty Room 1" node.
- Video Window:** A small window showing a nurse standing by a patient in a hospital bed.
- Possible Actions for >> Patient:** A list of actions with associated times and costs:
 - Take from casualty: Time: 5 mins, Cost: \$0
 - Administer oxygen: Time: 8 mins, Cost: \$0
 - Take arterial blood for gases: Time: 2 mins, Cost: \$0
 - Discussion 1: Time: 0 mins, Cost: \$0
 - Examine gas results: Time: 2 mins, Cost: \$0
 - Discussion 2: Time: 0 mins, Cost: \$0
 - Check Shona's progress: Time: 0 mins, Cost: \$0
 - Treat Shona: Time: 15 mins, Cost: \$0
 - Obtain history: Time: 4 mins, Cost: \$0
 - Discussion 3: Time: 0 mins, Cost: \$0
- You are visiting >> Casualty/Room 1:** A section with a "Patient" link and a text box containing the text: "Shona is too busy concentrating on breathing to notice you have entered the room. You observe that she is centrally cyanosed her chest is over-inflated and her accessory muscles are active." Below this is a video player with a "Click play to start video" button and a standard video control bar.



PBLi – The details

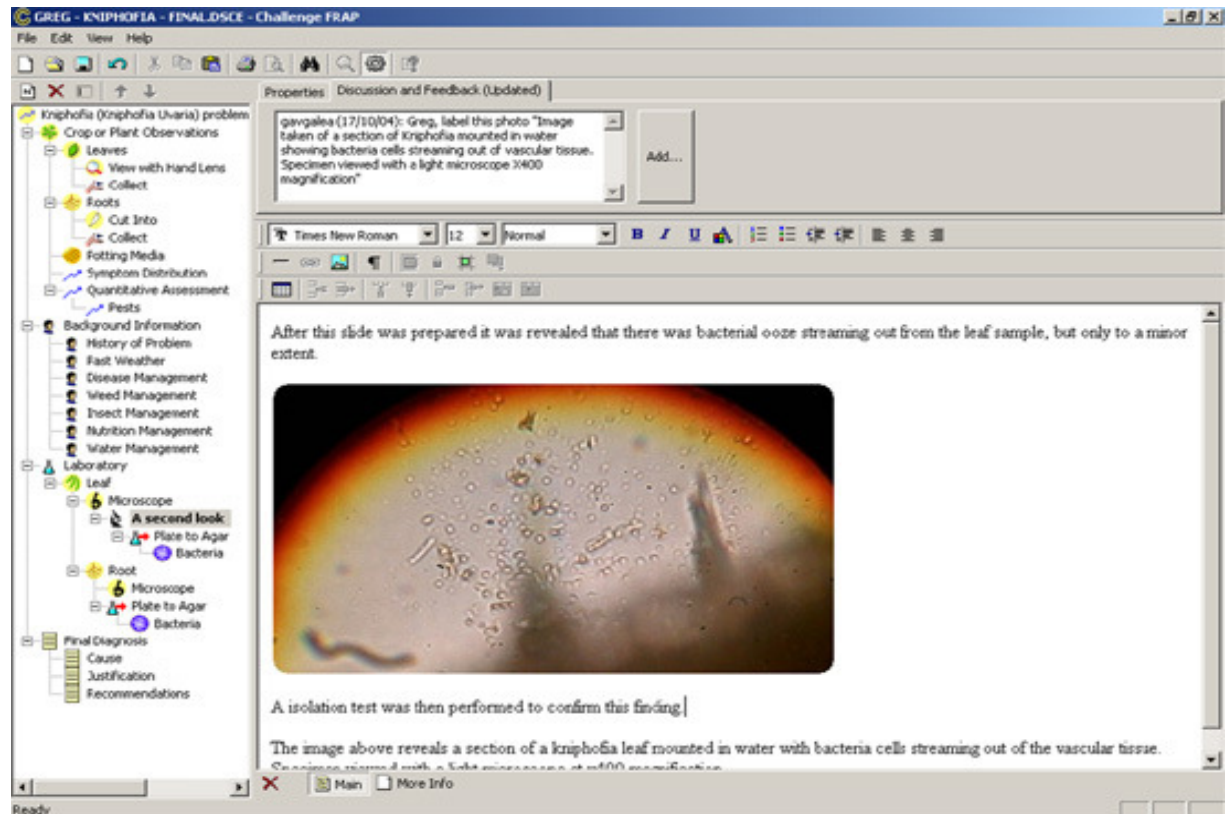
- How the software works
 - Playing a scenario
 - Authoring a scenario

Background to the Project

- CHALLENGE - Unforeseen usage

- Challenge FRAP
(**F**orm for
Recording the
Analysis of
Problems)

- Templates can act as both guides and reporting forms.





FRAP – The details

Some examples

- PBL – Project (Massey)
- Plant Diagnosis (OZ)



ECDF Proposal

- Aim of ECDF
 - build the e-learning capability of the tertiary education system
- This project..
 - Develop e-learning mechanisms by which dynamic, interesting problem or case-based scenarios can be reported on, or delivered to students.



Components of the Project

- Provide TEIs with...
 - A customised, improved version of PBL-Interactive
 - At least fifteen problem-based scenarios in a variety of subject domains for use as exemplars
 - CHALLENGE FRAP
 - Training material (manuals and guides)

What we are starting with...

- A basic version of Challenge FRAP. We need...
 - More generic icons
 - Some interface improvements
- Little supporting material. We need
 - Guides, manuals, workshops of how PBL scenarios can be storyboarded, authored and embedded into courses.





What we are starting with...

- A basic version of PBL-Interactive. We need...
 - An ability to save a session and return to it later
 - Team playing functionality
 - Tailored feedback
 - Scenario export functionality
 - Scoring feature
 - Real-time activity recording
- Few Exemplar Scenarios. We need...
 - Fifteen exemplar scenarios in covering a wide range of disciplines

The eCDF project – How can you be involved?

- PBL-Interactive
 - Domain experts needed for exemplar scenarios
 - Domain experts needed for verification of scenarios
 - Educational research required
- CHALLENGE FRAP
 - More use and feedback
- Both Tools
 - Familiarization in a teaching environment and feedback



What's wrong with this picture? - Constructing and delivering problem-based scenarios for student exploration

- In the last section of this workshop...
 - Follow the supplied tutorial to construct a subset of this scenario in PBLi
 - Take a look at FRAP
 - Fill in the survey form

