



Penfield Virtual Hospital

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<http://www.penfieldvirtualhospital.info>



Welcome to Penfield Virtual Hospital:



Setting the Context

Explore Some of the Challenges Facing Health Care Education

Describe How Penfield Can Address the Challenges

Overview of Penfield

History

Features

Extensibility to other disciplines

Developing a community of users

Where are we now?





Challenges for Health Care Education

- Maintain Intellectual development & clinical progression for unconventional students. 'Fit for Practice' 'Fit for Purpose.'
- Placing Health Care education in context
 - 'Need to locate theory development in clinical context:' *QAA HE 2001*
 - 'The patient's experience is central to learning & Healthcare:' *DoH 2003*
- Evidence of a widening theory – practice gap practice/academic divide
- Spiralling attrition rates evidence of links to perceived relevance of the course
- Larger numbers of students (impact on resources e.g. marking time)
- Reduction in numbers of clinical mentors and training circuits



Addressing the Challenge



- Allows students' of different ability and learning styles to progress at different rates
- Provides an environmental and patient context to learning materials *Context to Concept approach to learning*
- Allows exploration of 'application of theory to practice'
- More flexible staggered use of resources including self marking system
- Immediate relevance to what it is to be a Health Care worker
- Situated engaged learning in real patient case history, potential to substitute some clinical practice

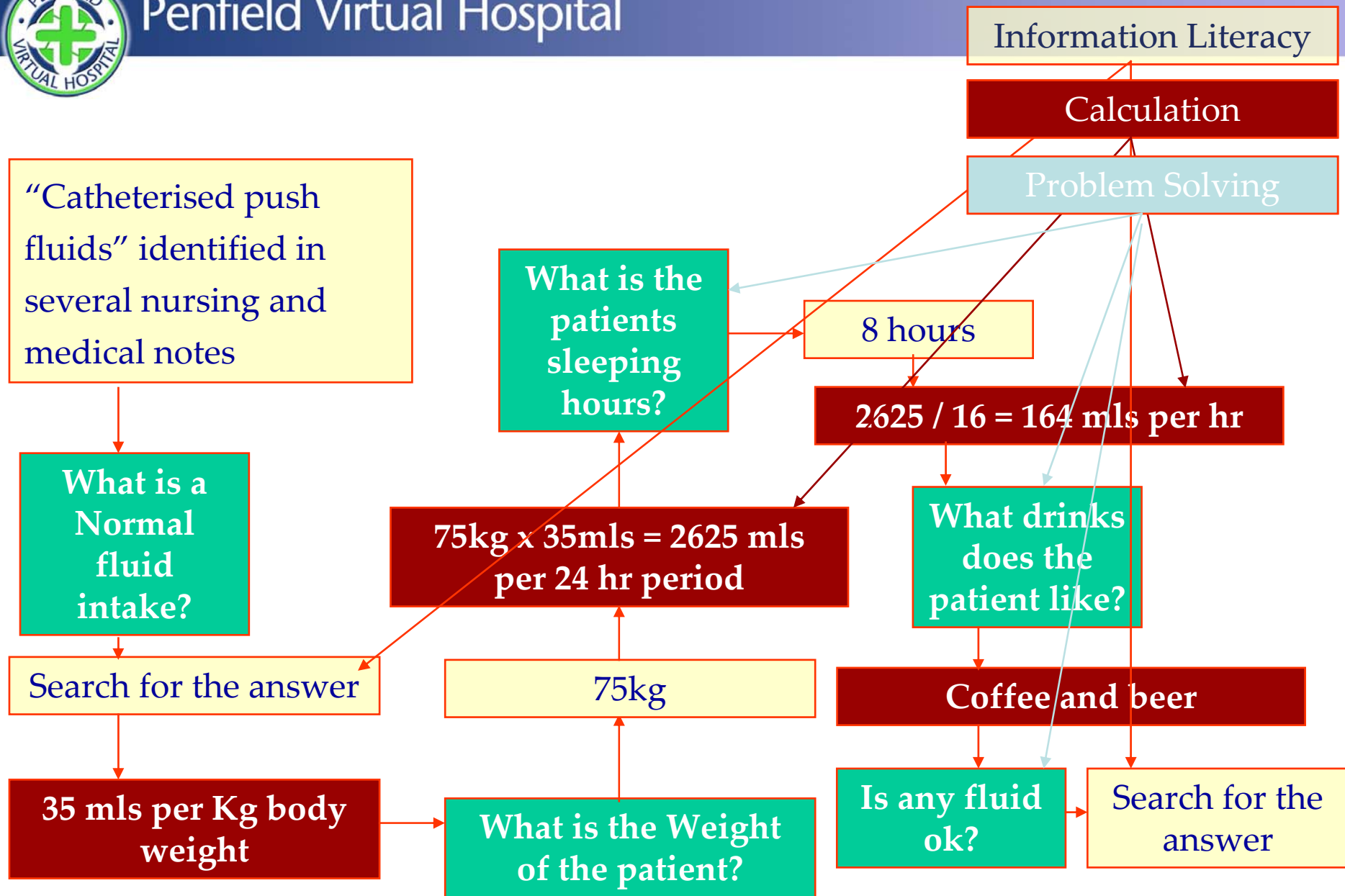


What is Penfield?



Computer Based Learning Package that:-

- Develops critical literacy, information literacy and management literacy within the context of patient care and service delivery
 - Examples
- Is populated with real patients case histories
- Has a self contained learning management system
- Has features that support management of the care environment
- Has the potential to manifest a curriculum





How much fluid more than normal = push ?
10%? 20%?

Search for the answer

+10% = 262 mls extra to 2625 = 2887/ 16 = 180 mls per hour

Are there any contraindications to increasing fluid?

Search for the answer

Do any of the contraindications exist for this patient?

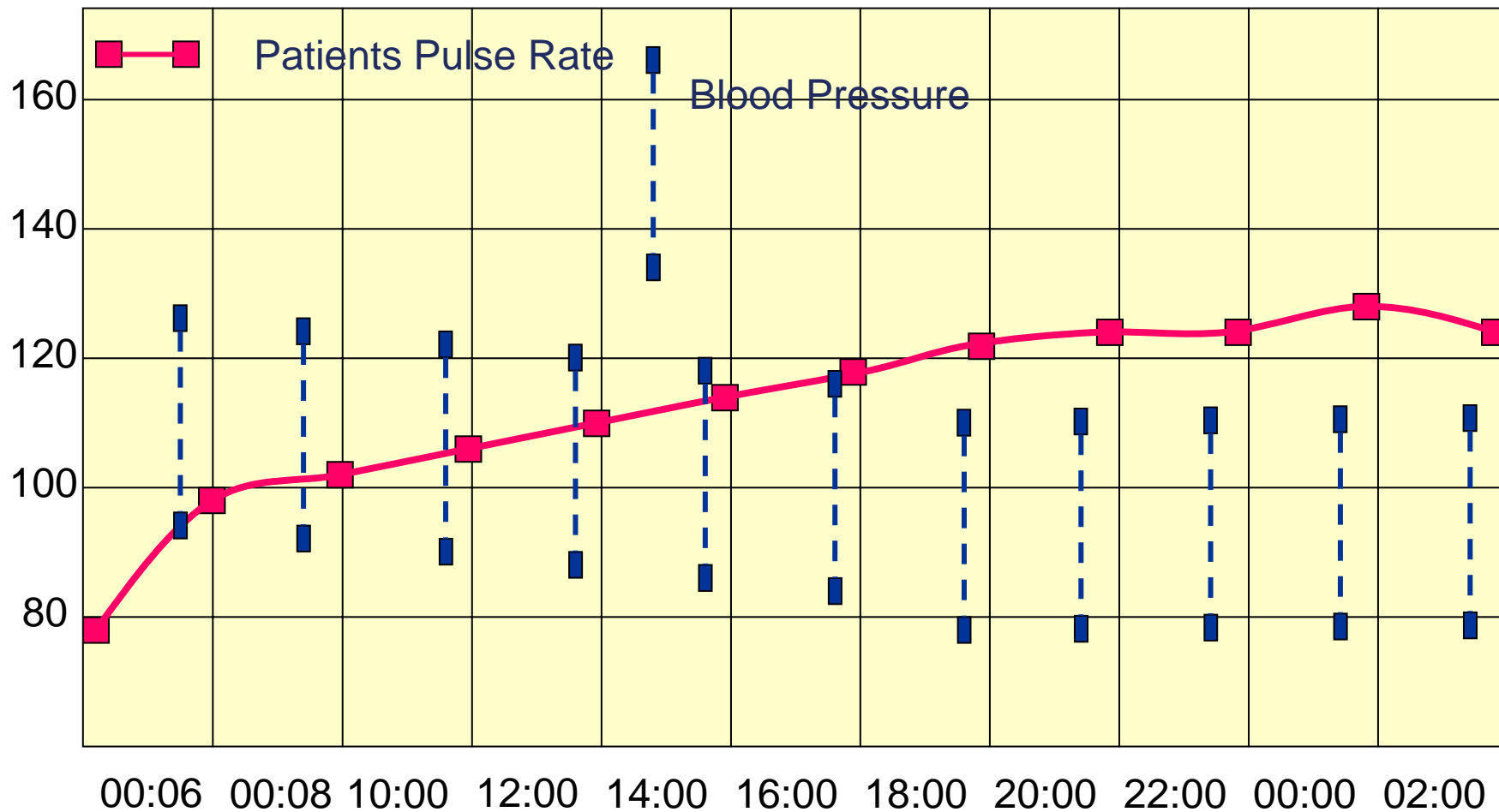
Search for the answer

Rewrite the nursing note
"Patient catheterised increase fluid intake by 10% to 180mls per hour for 2887mls per day. No contraindications to increasing fluids for Mr. Ward. Mr. Ward will alternate between water and coffee during the day with two tins of beer on an evening.

Good example of EBP in a patient context.



Critical thinking: What might explain these facts?





Ethical principles:

- **Learning Outcomes**
 - ... Ethical principles *Nonmaleficence* and *Beneficence*
- **Case History**
 - Patient disorientated to time and place noisy at night keeping other people awake. Decision taken to sedate the patient.
- **Case Based learning materials**
 - Who benefited from the sedation?
 - Did harm accrue to the patient from the sedation?
 - Should the rights of the individual be subordinate to the groups?
 - What were the alternatives to sedation?
 - Any evidence that alternatives were considered?
 - What factors may have prevented staff from exploring alternatives?



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What does the system do?



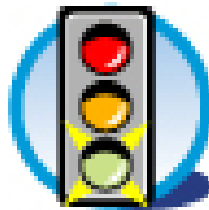
Allows users to:-

- explore *data* in context = *Information*; Information in context = *knowledge*
- add, edit and view data held in patient records
- Engage with patient case histories
- Answer questions asked in context
 - Immediate feedback
 - Right answer displayed



But First a Tour of Penfield

Penfield





Engagement with Penfield is through

- **Scenarios**

Scenarios are built from:

- **Scenes**

Scenes are built from:

- **Interactions**

Are completed by users



All require
Components



Scenario



- A scenario represents the patient's *story* it enables the learner to engage with Penfield to satisfy learning outcomes
- Penfield *runs* in its own time 'Penfield Time'. On initial log on Penfield sets its internal clock to *n time* Monday of the week initial log on occurred. Once set Penfield time elapses sequentially as the *scenario* progresses.



Scenes



- Scenes break up the scenario into manageable chunks typically around key learning outcomes or themes.
- Typically scenes will introduce, illustrate or reinforce nursing care/context principles.



Scenes



- From time to time users will be given information about the scene and what principles are being explored; In addition users will be prompted to give answers to questions relating to the scene
- These answers will accrue as evidence that the scenario has been completed.
- Scenes are an aggregation of *interactions*



Interactions

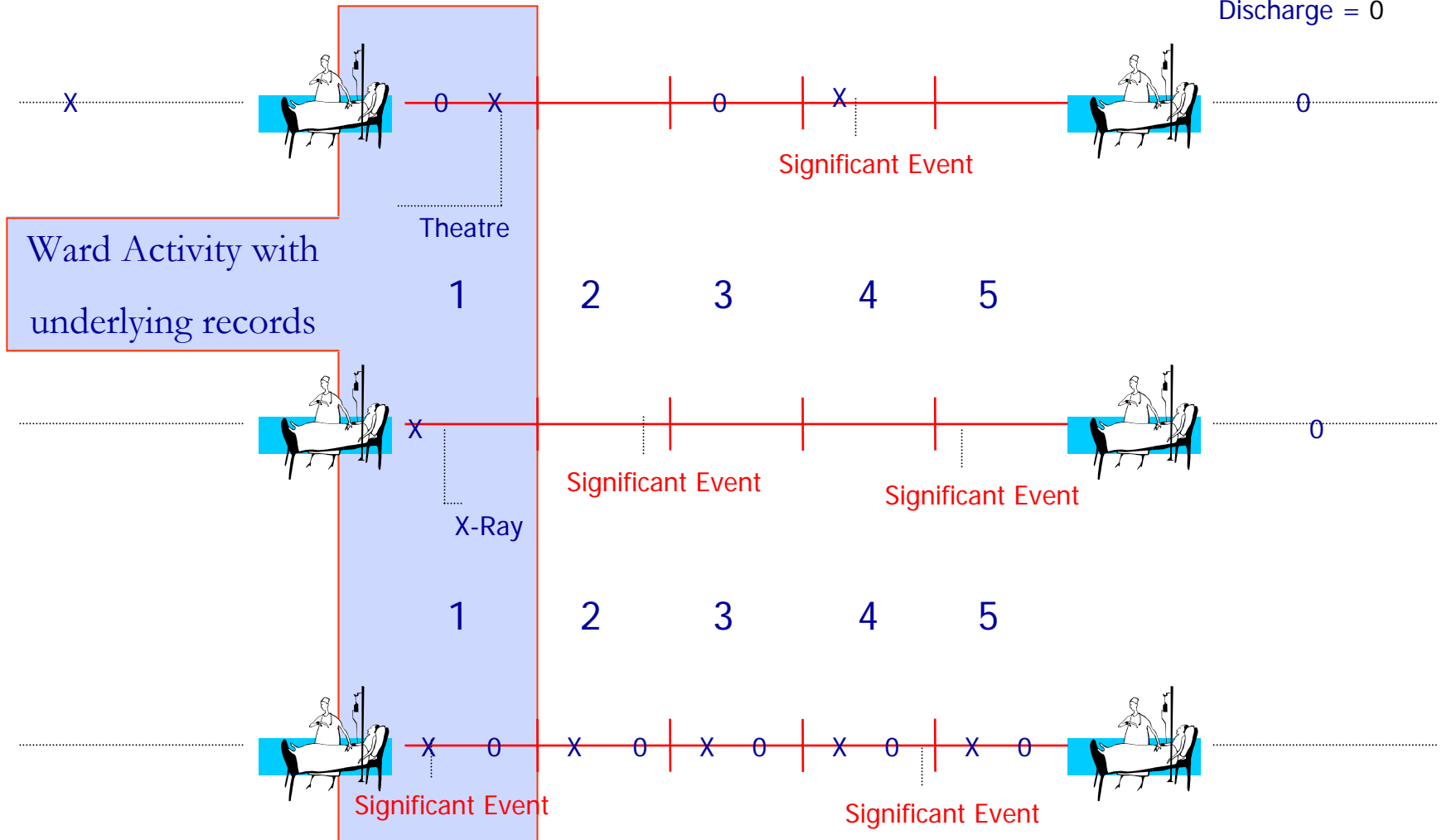
- Specific user interactions with Penfield at a particular point in Penfield Time. Users must complete the interaction as instructed to continue e.g. enter a temperature reading.
- Penfield's clock moves on in response user interactions being completed



Penfield Virtual Hospital

Admission = X

Discharge = 0





Available components



Scenarios will determine the range of components that will be required to enact/complete the scenario.

- The Off Duty Manager
- Medical records
- Nursing Assessment
- POPR
- Browser
- Investigations
- Observation charts and
- Nursing Record
- Care Plan
- Qualification Bank
- Admission form
- Learning Management System



Challenges for Penfield

- Where do we get case notes from?
- Very difficult & Time Consuming to write scenario
 - Wider issue relating to context of scenario they will reflect UK, Huddersfield's approach to nurse education what about other places?
- Funding to take Penfield forward



Addressing the challenges

How do I get case notes?



- FDTL project 114/02 collecting two hundred real patient case notes [FDTL](#)
- Transcription of the case notes
- Population of Penfield with these case notes



Addressing the Challenges



Writing Scenario/ Funding to take Penfield forward?

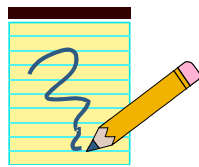
- Create and develop a community of Penfield users
- The community will contribute to the writing of the scenario
- Funding for further developments by the community



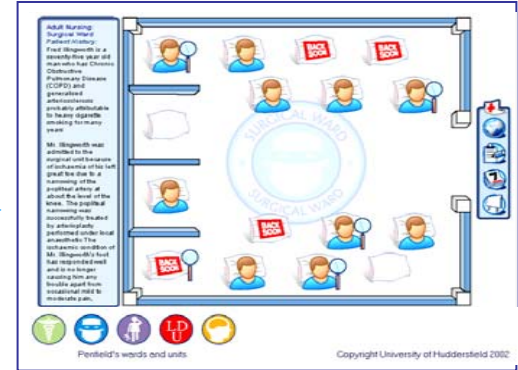
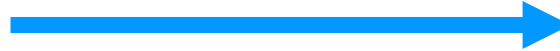
Community of Users



Sent to the centre



Community Write
the scenario



Mapped onto Penfield

Posted to the Web Site



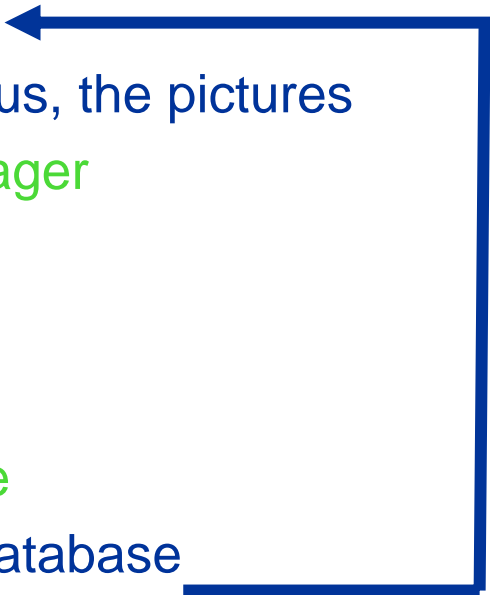
Available to all the
community

F
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b



Extensibility

Software components

- The User Interface
 - the buttons, the menus, the pictures
 - The User Interface Manager
 - the brain
 - The Data Manager
 - the 'gopher'
 - The Relational Database
 - and, of course, the database
- 



Clock & Controller



- The scenario will be mapped onto Penfield components/control system using the clock and controller entities



Smoke & Mirrors

- Penfield's patients have pertinent clinical data pre-loaded. This data is revealed as Penfield time clocks and thus gives an impression of ongoing patient activity.



Further Information

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