Centre for Innovation in Teaching and Learning

CITL Project Expression of Interest

Academic responsible for project: Dr Stephen Marshall
Department: Zoology
Title of project: The Virtual Penguin: A Population Simulator
Academic staff involved in project n/a

Please describe what you would like this project to create
This project would create a simulated penguin population accessed through the WWW that students could use to learn and revise basic concepts of penguin husbandry either at a distance or when they cannot be supervised with real penguins. This is similar to other virtual organisms available on the WWW such as the Virtual Frog (http://froggy.lbl.gov/virtual/) and Virtual Sheep (http://moutonking.com/index.php?SETLANGUAGE=en).

Students would be expected to manage a medium sized population of penguins in a dynamic and collaborative environment that would require them to be responsive to a variety of basic and exotic penguin requirements. The tool would allow for the lecturer to select an initial population of penguins with particular traits and then to schedule or add events (weather, predation etc) on an ad-hoc basis.

As noted by Fleischmann (2005, http://firstmonday.org/issues/issue10_5/fleischmann/index.html), existing virtual animal simulations are limited in that they encourage isolated experimentation rather than collaboration. The Virtual Penguin simulation is intended to be too big a task for an individual, requiring that students organise themselves and collaborate and cooperate in the care of the population of supplied penguins.

Please describe why your students need this project
Penguin husbandry is a key subject in the USP Antarctic Zoology programme and students need to develop a range of skills in safely working with penguin populations if they are to continue in their studies at third year and later. This presents a challenge however as penguin handling presents risks to the health and wellbeing of both the students and the penguins. It is necessary for students to develop certain skills, including the ability to work cooperatively, in a safe and controlled environment before experiencing the real thing. There is also the issue of providing opportunities for students to study in their own time and to reflect on the exercises.

Please indicate which USP courses and programmes will benefit from this project
PENG201, PENG211, PENG301, PENG312, PENG314, USP Antarctic Zoology programme undergraduate and honours.

Please indicate which existing CITL projects this new project will build upon and how that building upon will occur
This project is the first attempt by Zoology to engage in this area, we are not aware of any direct linkages to other CITL projects.

Signed: **(Project Academic Lead)** **Date:**
Signed: **(Head of Department)** **Date:**

Centre for Innovation in Teaching and Learning

CITL Project Full Proposal

Academic responsible for project: Dr Stephen Marshall
Department: Zoology
Title of project: The Virtual Penguin: A Population Simulator

Date expression of interest approved 10/Jul/2004

Intended delivery date: 21/Feb/2005

Academic staff involved in project: Dr Deb Shepherd, Dr Felix Artemis

Project objectives

1. Creation of a virtual environment able to provide students with the experience of managing a population of penguins. Achievement demonstrated by the use of such an environment in the delivery of PENG201 and the absence of technical faults or errors preventing completion of assigned tasks by the students.

2. Enabling collaborative work by students in managing a shared population of penguins. Achievement demonstrated by students completing coordinated tasks within the context of achieving objective (1).

3. Providing teaching staff with a tool for demonstrating a variety of common challenges encountered while managing penguins and a mechanism for setting these as exercises for student assessment. Achievement demonstrated by the use of the virtual environment by teaching staff during course sessions and the absence of technical faults or errors preventing completion of teaching tasks.

Student learning outcomes

By completing the simulation students are intended to be able to develop and demonstrate:

1. An ability to identify and describe common health problems encountered when raising and caring for penguins. Achievement demonstrated through the completion of exercises using the simulation that expose them to these problems combined with their practical reports demonstrating that they understand what was happening.

2. An ability to construct a plan for managing populations of penguins taking into account a range of penguin requirements. Achievement demonstrated through completion of the exercises in the simulation that require planning to address over several days and in collaboration with other students.

3. An ability to analyse a penguin population and identify priorities for care and management. Achievement demonstrated through the completion of practical reports based on the simulation exercises.

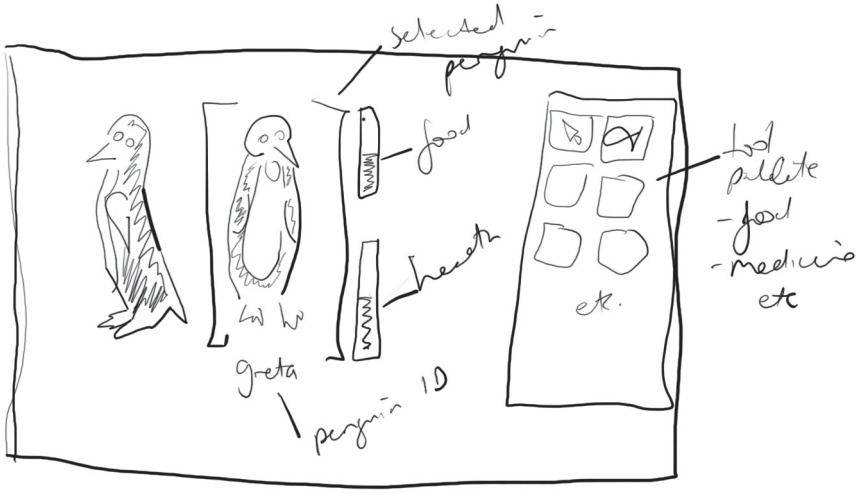
4. An understanding of key techniques and equipment needed to manage penguin populations. Achievement demonstrated through the use of such equipment and techniques correctly in resolving simulation exercises.

Please describe what you would like this project to create
This project would create a simulated penguin population accessed through the WWW that students could use to learn and revise basic concepts of penguin husbandry either at a distance or when they cannot be supervised with real penguins. This is similar to other virtual organisms available on the WWW such as the Virtual Frog (http://froggy.lbl.gov/virtual/) and Virtual Sheep (http://moutonking.com/index.php?SETLANGUAGE=en).

Students would be expected to manage a medium sized population of penguins in a dynamic and collaborative environment that would require them to be responsive to a variety of basic and exotic penguin requirements. The tool would allow for the lecturer to select an initial population of penguins with particular traits and then to schedule or add events (weather, predation etc) on an ad-hoc basis.

As noted by Fleischmann (2005, http://firstmonday.org/issues/issue10_5/fleischmann/index.html), existing virtual animal simulations are limited in that they encourage isolated experimentation rather than collaboration. The Virtual Penguin simulation is intended to be too big a task for an individual, requiring that students organise themselves and collaborate and cooperate in the care of the population of supplied penguins.

The system should look something like this image, with students having the ability to select individual penguins and use a selection of tools to perform various tasks and gather information.



The penguin environment should be easily accessible through a standard USP web environment internally and by students from external computers via the USP Blackboard facility. The information about the penguins should be stored in a database that allows for simultaneous access by multiple students to the simulation. A detailed log system should ensure that all events in the simulation should be able to be analysed later for assessment and research purposes and the user responsible should be indentified. The system should allow for collaboration using chat and discussion boards, and there should be a shared journal for communicating events and decisions made by the students. The system should not however impose any particular form of collaboration on the students as they should have the opportunity to develop this form themselves (with guidance from the teaching staff).

Please describe why your students need this project
Penguin husbandry is a key subject in the USP Antarctic Zoology programme and students need to develop a range of skills in safely working with penguin populations if they are to continue in their studies at third year and later. This presents a challenge however as

penguin handling presents risks to the health and wellbeing of both the students and the penguins. It is necessary for students to develop certain skills, including the ability to work cooperatively, in a safe and controlled environment before experiencing the real thing. There is also the issue of providing opportunities for students to study in their own time and to reflect on the exercises. It is also expected that this project will reduce the number of fatalities encountered in this programme.

Please indicate which USP courses and programmes will benefit from this project
PENG201, PENG211, PENG301, PENG312, PENG314, USP Antarctic Zoology programme undergraduate and honours.

Please describe how this project is linked to the departmental and USP Learning Plans
The PENG201 course is identified within the Zoology Learning Plan as a key course for preparing students for practical work in the Antarctic environment. While safety aspects are covered elsewhere, they also need the ability to manage the wildlife in a manner than ensures the health and safety of the organism, other workers and themselves. This goal is in line with the USP Learning Plan Goal 1 of producing graduates with direct experience of working safely and effectively in the Antarctic environment. Providing students with practical experience is key to acheiving this but doing so is very expensive, particularly if time is wasted on tasks which can be learnt and experienced effectively by alternative means. Preparing students in this way means that the real practical sessions can focus on substantive issues.

Please describe in your own words the impact this project is likely to have on the identified courses and programmes
Students will already have some experience in what they are likely to encounter, improving their ability to appreciate and learn from the real experiences and they wil have already developed a culture of teamwork and collaboration vital for effective work in the challenging Antarctic environment.

Please describe in your own words the impact this project is likely to have on the academic staff involved
Staff will be able to easily provide students with the ability to experience a wide variety of issues encountered in the real world without placing themselves, the animals or students in risk of harm. Staff will be able to focus on substantive issues while supervising students in the external environment with the confidence that students are better prepared to cope with the issues.

Student Workload Impact Statement
This project will replace 20 hours of scheduled external work with a similar amount of self-scheduled work able to be undertaken in a variety of locations through the WWW. Students will also be able to revise in their own time and review earlier work undertaken in the same system used for assessment thus making the time spent more effective.

Staff Workload Impact Statement
This project will replace 20 hours of scheduled contact time in the external environment with similar time spent online and without the responsibility of ensuring students and animals are safe. It is anticipated that this project will greatly improve the quality of the work environment for staff.

Please indicate which existing CITL projects this new project will build upon and how that building upon will occur

This project is the first attempt by Zoology to engage in this area, there are however opportunities identified by CITL for reusing their Flash libraries for the interface and the database communication. Media elements will be extracted from the Zoology and Marketing archives and the communication tools used will be provided through the standard Blackboard interface.

What is the anticipated lifetime of this project

It is anticipated that this simulation will become part of the core materials for the PENG201 course which is a mandatory course in the Zoology programme and thus we anticipate ongoing use with maintenance to refresh content and remove bugs on an annual basis and a review after three years to ensure that the Flash technology remains the appropriate vehicle for delivery and to add any new options for penguin challenges or treatment that need to be included. This review will be timed to coincide with the external review of the PENG courses.

Signed: **(Project Academic Lead)** **Date:**

Signed: **(CITL Reviewer)** **Date:**

Signed: **(Head of Department)** **Date:**

Attachments

The following documents must be attached to this proposal

1. **Intellectual property agreement signed by involved Academics and an Authorised Manager**
2. **Initial budget estimate**
3. **Accessibility issues statement from Disabilities Support**
4. **Ethics approval or waiver**

Centre for Innovation in Teaching and Learning

CITL Project Provisional Budget

Academic responsible for project: Dr Stephen Marshall
Department: Zoology
Title of project: The Virtual Penguin: A Population Simulator

Date expression of interest approved 10/Jul/2004
Intended delivery date: 21/Feb/2005

Staff person	Hours needed	Cost
Graphic designer ($50k or $51/hr)	75	$3,825
Programmer ($75K or $77/hr)	150	11,550
AV production ($50k or $51/hr)	75	3,825
Blackboard specialist ($75K or $77/hr)	37.5	2,887
Online discussion specialist ($75K or $77/hr)	30	2,310
Contingency ($50k or $51/hr)	37.5	1,912
CITL Total		**$26,309**
Academic time	170	$12,936
Project Total		**$39,245**

Signed: **(Project Academic Lead)** **Date:**

Signed: **(CITL Reviewer)** **Date:**

Centre for Innovation in Teaching and Learning

CITL Project Plan

CITL Project Leader: Dr Alan Thomas

Academic responsible for project: Dr Stephen Marshall
Department: Zoology
Title of project: The Virtual Penguin: A Population Simulator

Date expression of interest approved	10/Jul/2004
Date full proposal approved:	18/Jul/2004
Intended delivery date:	21/Feb/2005

Academic staff involved in project: Dr Deb Shepherd, Dr Felix Artemis

Project objectives

1. Creation of a virtual environment able to provide students with the experience of managing a population of penguins. Achievement demonstrated by the use of such an environment in the delivery of PENG201 and the absence of technical faults or errors preventing completion of assigned tasks by the students.

2. Enabling collaborative work by students in managing a shared population of penguins. Achievement demonstrated by students completing coordinated tasks within the context of achieving objective (1).

3. Providing teaching staff with a tool for demonstrating a variety of common challenges encountered while managing penguins and a mechanism for setting these as exercises for student assessment. Achievement demonstrated by the use of the virtual environment by teaching staff during course sessions and the absence of technical faults or errors preventing completion of teaching tasks.

Student learning outcomes

By completing the simulation students are intended to be able to develop and demonstrate:

1. An ability to identify and describe common health problems encountered when raising and caring for penguins. Achievement demonstrated through the completion of exercises using the simulation that expose them to these problems combined with their practical reports demonstrating that they understand what was happening.

2. An ability to construct a plan for managing populations of penguins taking into account a range of penguin requirements. Achievement demonstrated through completion of the exercises in the simulation that require planning to address over several days and in collaboration with other students.

3. An ability to analyse a penguin population and identify priorities for care and management. Achievement demonstrated through the completion of practical reports based on the simulation exercises.

4. An understanding of key techniques and equipment needed to manage penguin popu-

lations. Achievement demonstrated through the use of such equipment and techniques correctly in resolving simulation exercises.

Overview of project deliverables

1. A virtual penguin applet interface developed in Flash and able to be embedded as an object within Blackboard. (Objective 1, Student Learning Objectives 1-4)

2. A database for storing penguin information and logs of activity used by the virtual penguin simulation to maintain and share state over time and between multiple users. (Objectives 1 and 2, Student Learning Objective 2)

3. An instructor interface to the simulation supporting direct manipulation of penguin attributes and allowing for scheduling of significant events in the simulation for students to address. (Objective 3, Student Learning Objectives 1-4)

4. A shell in Blackboard linking the applet to associated discussion board and chat facilities and providing an initial set of documentation and instructions aimed at student users. (Objective 2, Student Learning Objective 2)

5. A simulation monitor programme that continuously updates the game state as time passes and in response to user actions and teacher initiated events. (Objective 1, Student Learning Objective 2)

Student audience

Students enroled in PENG201, face-to-face delivered programme.

Project team

Project lead
Graphic designer
Programmer
AV production
Blackboard specialist
Online discussion specialist

Design rationale

The intention is to provide students with a window into a virtual antarctic environment containing a simplified ecosystem of penguins and various natural predators and food items. The ecosystem is shared between all of the users of the system and is dynamic, continuing to run the simulation in real time even if no users are connected. The simulation is also capable of being placed into particular states as needed by a teacher to demonstrate particular techniques or situations that students must resolve.

As the environment is shared students must collaborate and cooperate in their activities if they are to avoid counter-productive outcomes such as overfeeding penguins food or medicine items or disrupting the animals through excessive handling. As well as a real time interface showing the actions of other students, the system is intended to be used in conjunction with text chat and an asynchronous discussion board. These communication tools can be used students to coordinate their activities and discuss the progress of the simulation. The absence of a structured communication approach is deliberate, forcing the students to determine for themselves how they will collaborate and organise their activities.

Throughout a normal simulation use of the system predefined events can happen at the instigation of the teaching staff. These are intended to expose students to a range of real

world challenges and provide opportunities to apply a range of responses and tools. The range of tools and activities chosen is matched with the real-world activities that they will undertake in the practical aspects of this course.

As students undertake actions these are recorded in logs for analysis and reporting. In addition, the students are provided with a shared journal that is intended to be used for recording the rationale behind their activities and any reflection on the outcomes.

Other course materials discuss in detail the equipment and techniques that the students will use in the simulation. The ability for teachers to display pre-defined states means that the simulation tool can be used during teaching to illustrate the equipment and techniques thus ensuring that the students are familar with the interface and the tasks they will undertake before engaging in self-directed actions during a more extensive simulation.

Interaction strategy

Student-Student

Students are provided with a chat tool, discussion forum and shared journal along with opportunities to meet together in person. The simulation tasks are sufficiently complex and extensive that individual students cannot complete all of the tasks by themselves requiring the students to collaborate and establish protocols for organising themselves and their work.

Student-Teacher

Teaching staff will be present to provide advice on request and to encourage students to adopt an effective collaboration strategy. They will also monitor and participate in chat and discussion sessions as needed, providing commentary on aspects of real-world activity that might differ from the simulation.

Student-Content

Students will be sharing access to a complex ecosystem maintained by the simulation and affecting outcomes by their collective actions. They will be creating content through the reflective journaling activity. Students are also provided with an extensive body of course content which they are expected to use in informing their decisions.

Teacher-Content

As well as defining the initial state of the simulation, teachers will be able to pre-define key events that progress the simulation and challenge the students. They can also initiate particular events dynamically if necessary to force particular outcomes or react to particular student activities not addressed by the simulation engine.

Teacher-Teacher

The shared nature of the simulation means that collaboration amongst the teaching staff is also possible and particular pre-defined states can be shared and used as needed by different teachers and courses.

Content-Content

All content for the simulation is stored in a database which is able to be extended as necessary to incorporate additional events, species, and tools. All actions are logged and able to be replayed or analysed to determine what happened during the simulation. Help information provided in the simulation is linked to externally provided static course content providing users with information beyond that represented in the simulation as well as guidance of appropriate actions to take in particular situations.

Student Workload
This project will replace 20 hours of scheduled external work with a similar amount of self-scheduled work able to be undertaken in a variety of locations through the WWW. Students will also be able to revise in their own time and review earlier work undertaken in the same system used for assessment thus making the time spent more effective.

Staff Workload
This project will replace 20 hours of scheduled contact time in the external environment with similar time spent online and without the responsibility of ensuring students and animals are safe. It is anticipated that this project will greatly improve the quality of the work environment for staff.

Infrastructural requirements
Database table space and support for 20 active listeners
Server for the simulation engine (Java)
Blackboard

Project timeline

1/Sep/2004	**Project development commences**
30/Sep/2004	**Initial system mockup complete**
15/Sep/2004	**Usability testing complete**
30/Sep/2004	**Graphic design complete**
31/Oct/2004	**First version complete**
30/Nov/2004	**Blackboard shell and communication structures complete**
20/Dec/2004	**User testing complete**
15/Jan/2005	**Final updates to system complete**
31/Jan/2005	**System documentation complete**
4/Feb/2005	**QA review complete and approval to deploy obtained**
8/Feb/2005	**Instructor training complete**
21/Feb/2005	**Project initial deployment for teaching**
15/Jun/2005	**Student evaluation undertaken by CITL**
30/Jun/2005	**Project self review report from academic lead provided to CITL**
30/Jun/2005	**Project external review report provided to CITL**
15/Jul/2005	**Ongoing deployment decision from CITL Project Committee**

Planned lifecycle of deliverables
Annual maintenance to update versions of software and address any minor bugs - *1 week programmer time*
Triannual review of entire system to coincide with review of PENG courses and update the software if moderate changes required - *1 month programmer time*

Signed:	**(CITL Project Lead)**	**Date:**
Signed:	**(Project Academic Lead)**	**Date:**
Signed:	**(Director CITL)**	**Date:**

Attachments

The following documents must be attached to this project plan

1. Quality assurance plan
2. Budget

Centre for Innovation in Teaching and Learning

Project Self Review

Academic responsible for project: Dr Stephen Marshall
Department: Zoology
Title of project: The Virtual Penguin: A Population Simulator

Date project approved: 5/Feb/2005

Dates course started: 21/Feb/2005 **Completed:** 18/Jul/2004

Project objectives (from original proposal):

1. *Creation of a virtual environment able to provide students with the experience of managing a population of penguins.*

   This environment was created by the CITL team and used in delivery of the PENG201 paper during trimester 1 2005. The simulation was used as part of the practical session for weeks 4, 5, 8, 9 and 10. Minor problems were encountered at the beginning arising from older versions of Flash software on student computers but these were easily resolved by ITS and Student Support.

2. *Enabling collaborative work by students in managing a shared population of penguins.*

   The students were required to collaborate in order to complete the specified tasks and were provided with a variety of tools to assist with this process. In order of use these were the chat (used extensively), discussion board (used less often but most postings were detailed and related to coordinating complex tasks), and the journal (not very popular and with many students supplying brief and cryptic entries). The use of these tools did result in successful completion of the group tasks although it was noted that some students contributed more than others and this was reflected in the marking.

3. *Providing teaching staff with a tool for demonstrating a variety of common challenges encountered while managing penguins and a mechanism for setting these as exercises for student assessment.*

   This environment was created by the CITL team and used in delivery of the PENG201 paper during trimester 1 2005. The simulation was used in class throughout the course by the lecturing staff to discuss particular points and to review key events arising from the practical work. To technical problems were encountered in the classes.

Student learning outcomes (from original proposal):

By completing the simulation students are intended to be able to develop and demonstrate:

1. *An ability to identify and describe common health problems encountered when raising and caring for penguins.*

   Students were exposed to ten different health problems over the course of the simulations. The only problem that was not identified by all students was an obscure vitamin deficiency used in the last week of practicals to complicate breeding exercises. The iden-

tified problems were correctly described and the grade distribution for the practical work indicates a 5-10% increase in performance compared to previous years.

2. *An ability to construct a plan for managing populations of penguins taking into account a range of penguin requirements.*

   Completion of the exercises successfully required that the student cooperate and detailed plans were developed and agreed using the discussion board to acheive consensus and the text chat to coordinate the implementation. These plans were, on the whole, successful as evidenced by the completion of the tasks.

3. *An ability to analyse a penguin population and identify priorities for care and management.*

   The analysis of the population was undertaken during the planning process discussed above in (2). Students were required to reflect on these plans, including priorities for action, in their practical reports. These were generally satisfactory with most students demonstrating an appreciation of the tasks which were the highest and lowest priority.

4. *An understanding of key techniques and equipment needed to manage penguin populations.*

   As noted above, the students were able to use the simulated techniques and equipment to complete the tasks correctly. In addition they were able to complete the real-world tasks in less than half the time it has taken previously and with no fatalities or serious injuries amongst the penguins or students - a significant improvement on previous years.

Please describe in your own words (300 max) the impact this project has had on the course

The major impact this project has had is in the greatly increased competence shown by students in completing the real-world practical tasks. In previous years it has been very difficult to motivate students to read and thnk about the tasks they will face before the practical sessions. Previously this has meant that valuable time outside has been wasted ensuring that the students are properly equipped and organised to perform the tasks. Also notable was the significantly improved teamwork evident - the students were able to organise themselves and were frequently overheard to be referring to simulation experiences when making decisions about what needed doing. This greater preparation and efficiency has also translated into much less time being needed to complete the tasks meaning that the students were less tired and made fewer mistakes. No fatalities or serious injuries amongst the penguins or students is a significant improvement on previous years. Finally, it has been noted that the students completing this course have been able to complete work in subsequent courses more efficiently and our retention rate through the programme is up 5.4% (excluding fatalities).

Please describe in your own words (300 max) the impact this project has had on yourself as a teacher

It has resulted in two conference presentations, one an invited presentation to an international conference on penguin health. One of the major challenges of teaching this course has in the past been the need to maintain constant vigilence over extended periods of time as students work in a potentially dangerous environment. The equipment and techniques they use can have dramatic effects on the health of the animals, with even basic steps such as approaching and handling them likely to result in significant harm if done incorrectly. Poor preparation has meant that the students end up taking far longer to complete basic

tasks than is really necessary, resulting in exhaustion and long work hours for teaching staff. The significant improvement observed this time has made the experience significantly more pleasant. The work monitoring the students online as they completed the simulation tasks has definitely paid off. Another benefit of the project has been the ease by which teaching materials can be generated using the software to illustrate complex ideas or dynamic situations - much more satisfactory than my original transparencies.

Signed: **(Project Academic Lead)** **Date:**

Signed: **(Head of Department)** **Date:**

Attachments

The following documents must be attached to this project plan

1. **End of course student summative evaluation**
2. **End of course financial analysis**
3. **Any research papers arising from this project**

Centre for Innovation in Teaching and Learning

CITL Project Completion Report

CITL Project Leader: Dr Alan Thomas

Title of project: The Virtual Penguin: A Population Simulator

Date expression of interest approved	10/Jul/2004
Date full proposal approved:	18/Jul/2004
Intended delivery date:	21/Feb/2005
Project completion date:	5/Feb/2005

Project objectives

1. *Creation of a virtual environment able to provide students with the experience of managing a population of penguins.*

2. *Enabling collaborative work by students in managing a shared population of penguins.*

3. *Providing teaching staff with a tool for demonstrating a variety of common challenges encountered while managing penguins and a mechanism for setting these as exercises for student assessment.*

Student learning outcomes

By completing the simulation students are intended to be able to develop and demonstrate:

1. *An ability to identify and describe common health problems encountered when raising and caring for penguins.*

2. *An ability to construct a plan for managing populations of penguins taking into account a range of penguin requirements.*

3. *An ability to analyse a penguin population and identify priorities for care and management.*

4. *An understanding of key techniques and equipment needed to manage penguin populations.*

Overview of project deliverables

1. *A virtual penguin applet interface developed in Flash and able to be embedded as an object within Blackboard.*

2. *A database for storing penguin information and logs of activity used by the virtual penguin simulation to maintain and share state over time and between multiple users.*

3. *An instructor interface to the simulation supporting direct manipulation of penguin attributes and allowing for scheduling of significant events in the simulation for students to address.*

4. *A shell in Blackboard linking the applet to associated discussion board and chat facilities and providing an initial set of documentation and instructions aimed at student users.*

5. *A simulation monitor programme that continuously updates the game state as time passes and in response to user actions and teacher initiated events.*

Project team

Project lead	Dr Alan Thomas
Graphic designer	Jodi Shepherd
Programmer	David Wilson
AV production	Peter Thornton
Blackboard specialist	Dr Alan Thomas
Online discussion specialist	Dr Alan Thomas

Overview of project achievements

Infrastructural requirements

Database table space and support for 20 active listeners
Server for the simulation engine (Java)
Blackboard

Project timeline

Planned	Actual	Task
1/Sep/2004	1/Sep/2004	Project development commences
30/Sep/2004	22/Sep/2004	Initial system mockup complete
15/Sep/2004	12/Sep/2004	Usability testing complete
30/Sep/2004	15/Oct/2004	Graphic design complete
31/Oct/2004	7/Nov/2004	First version complete
30/Nov/2004	30/Nov/2004	Blackboard shell and communication structures complete
20/Dec/2004	5/Jan/2005	User testing complete
15/Jan/2005	20/Jan/2005	Final updates to system complete
31/Jan/2005	31/Jan/2005	System documentation complete
4/Feb/2005	5/Feb/2005	QA review complete and approval to deploy obtained
8/Feb/2005	15/Feb/2005	Instructor training complete
21/Feb/2005	21/Feb/2005	Project initial deployment for teaching
15/Jun/2005	11/Jun/2005	Student evaluation undertaken by CITL
30/Jun/2005	30/Jun/2005	Project self review report from academic lead provided to CITL
30/Jun/2005	30/Jun/2005	Project external review report provided to CITL
15/Jul/2005	n/a	Ongoing deployment decision from CITL Project Committee

Planned lifecycle of deliverables

Annual maintenance to update versions of software and address any minor bugs - *1 week programmer time*
Triannual review of entire system to coincide with review of PENG courses and update the software if moderate changes required - *1 month programmer time*

Project expenditure

Staff person	Hours needed	Planned Cost	Actual Cost
Graphic designer ($50k or $51/hr)	75	$3,825	$4,536
Programmer ($75K or $77/hr)	150	11,550	9,250
AV production ($50k or $51/hr)	75	3,825	1,650
Blackboard specialist ($75K or $77/hr)	37.5	2,887	2,650
Online discussion specialist ($75K or $77/hr)	30	2,310	2,000
Contingency ($50k or $51/hr)	37.5	1,912	0
CITL Total		**$26,309**	**$20,086**
Academic time	170	$12,936	$12,936
Project Total		**$39,245**	**$33,022**

Signed: **(CITL Project Lead)** **Date:**

Signed: **(Project Academic Lead)** **Date:**

Signed: **(Director CITL)** **Date:**

Centre for Innovation in Teaching and Learning

University of the South Pole SUM-L-3345

Student Summative Evaluation of Lecturing Report

Course: PENG201 Students Enroled: 28
Lecturer: Marshall, Stephen Students Responding: 28

		frequency	
1. I found this teacher was able to communicate ideas and information clearly.	(1) str agree	10	36%
	(2) agree	9	32%
	(3) neutral	8	29%
Median = 1.9	(4) disagree	1	4%
	(5) str disagree	0	0%
2. I found this teacher to be well organized.	(1) str agree	7	25%
	(2) agree	13	46%
Median = 2.0	(3) neutral	8	29%
	(4) disagree	0	0%
	(5) str disagree	0	0%
3. This teacher stimulated my interest in the subject.	(1) str agree	10	36%
	(2) agree	7	25%
	(3) neutral	8	29%
Median = 2.1	(4) disagree	2	7%
	(5) str disagree	1	4%
4. This teacher's attitude and behaviour towards students has encouraged my learning and study.	(1) str agree	11	39%
	(2) agree	9	32%
	(3) neutral	7	25%
	(4) disagree	0	0%
Median = 1.8	(5) str disagree	1	4%
5. I found this teacher to be enthusiastic about his/her teaching.	(1) str agree	11	39%
	(2) agree	9	32%
	(3) neutral	6	21%
Median = 1.8	(4) disagree	1	4%
	(5) str disagree	1	4%
6. This teacher has encouraged students to think critically about the subject.	(1) str agree	12	43%
	(2) agree	9	32%
	(3) neutral	6	21%
Median = 1.7	(4) disagree	0	0%
	(5) str disagree	1	4%
7. This teacher has achieved and maintained good rapport with students in class.	(1) str agree	10	36%
	(2) agree	10	36%
	(3) neutral	7	25%
Median = 1.9	(4) disagree	0	0%
	(5) str disagree	1	4%
8. How would you rate the overall effectiveness of this teacher?	(1) outstanding	5	18%
	(2) ...	14	50%
	(3) satisfactory	7	25%
Median = 2.1	(4) ...	0	0%
	(5) very poor	2	7%

An example of a teaching evaluation report