

KNOWLEDGE TRANSFER PARTNERSHIP ASSOCIATE FINAL REPORT

Name: Colin Cameron		Assoc No.: 4132
Name of Knowledge Base Partner Organisation:		Stirling University
Name of Company Partner:		Edinburgh Network Technologies
Qualifications at start of KTP Project:		
Degree Type: BSc	Class of Degree: 2(ii)	Subject: Computing Science & Artificial Intelligence
Higher Degree (if any):		
Please complete the following sections as fully as possible. Please do not change box sizes but complete this form using Times New Roman font size 10. The information you provide will not be used for purposes other than those relating to the central management of Knowledge Transfer Partnership.		

Project Objectives

- 1.** What were the objectives of your project as set out in the KTP Grant Application and Proposal Form?

To develop a call control facility within a 'softswitch' for multiple internet protocol handling in the delivery of internet voice services. A softswitch replaces the traditional telephony switching hardware with a software based solution that makes support and upgrades of the functionality easier.

Obj 1: Evaluate VoIP protocols and their interworking & recommend those the softswitch should support.

Obj 2: Identify a Softswitch platform capable of supporting protocols & call control functionality.

Obj 3: Define the Softswitch architecture for the call control function.

Obj 4: Design and develop the call control programme within the Softswitch.

Obj 5: Test call control function and integrate call control within the Softswitch system.

- 2.** If these changed, say whether or not they were approved by the LMC and describe the revised objectives and the reasons for the changes.

Objectives 1 and 2 were completed before the start of contract as an associate, as was most of Objective 3. The initial LMC agreed to proceed on with Objectives 4 and 5. The functionality in Objectives 4 and 5 is somewhat vague and this was redefined in a series of phased deliveries. These phases were further split for delivery and contained additional functionality beyond the objectives above as advised at the LMCs. The three new overall phases were :

Phase1: Basic functionality required for customers (minimum viable product)

Phase2: Expanded call control and centrex functionality (improved stability, new feature system, call pick-up, call divert features)

Phase3: More advanced features and system-wide state monitoring, support for graphical call manager utility

Project Activities

- 3.** Give an account of your project describing the main activities, milestones (with dates) and outcomes.

The initial thrust of the project was to take the Open Source Vovida Vocal softswitch platform and develop it into a commercially viable, stable, softswitch platform.

This involved adding extra functionality to support telephony centres and other extended features.

The initial phase was supported by the launch of the nPlusOne company and brand as a subsidiary of Edinburgh Network Technologies. Following that the further phases (as described above) were added basis on customer feedback and requirements.

Milestones:

Company Launch -- 5th June 2003

First Customer Rollout – September 2003

Phase 2 Rollout – June 2004

Phase 3 Rollout – September 2004

Project Activities

- 4.** Provide an analysis of changes made as the project progressed and lessons learned from the experience. The project has already progressed considerably when it started, however the overall goals of the project changed very little. Instead further phases were added to extend the project past it's initial goals.

Because of the changing needs of the customers the rest of the project was implemented in a phased format to allow the project to adapt to the needs of the customers.

Project Effectiveness

- 5.** Give your views of the effectiveness of the project and the levels of satisfaction with it of yourself, of the Chairman of the LMC, of other members of your project team, of your Consultant and any others who had a stake in the project objectives.

Overall I think the project has been very effective and this can be seen as nPlusOne now have a functional SoftSwitch with customers using it.

Personally I am satisfied with how the project went and the benefits I gained throughout my time here, however I'm unsure whether the same can be said of the Knowledge Base and Industry partners. I'm not sure that nPlusOne gained any more from my employment as a TCS/KTP associate than they would have had I been an ordinary employee, although I hope tighter bonds with Stirling University continue after my leaving. Also the bonds with Stirling University have allowed nPlusOne to use the university as a 'Sounding Board' to guide the path of the project.

Stirling have said that they have benefited from the project but I feel that perhaps there was more benefit to be had that didn't materialise – it's difficult to say why this is the case. Some projects will lend them selves to more quantifiable knowledge transfer than others, and it's possible in this case that the knowledge transferred just hasn't been so obvious to me in my position.

I think that the project I was doing, or at least the state it was in once I joined, is not best suited to a KTP project. The fact that a project team was involved and the relatively loose nature of the long-term goals (which is completely understandable given the nature of the system) made fitting the KTP framework awkward at times. This is mostly reflected in the need to deliver objectives 4 and 5 of the project in a series of phases, this is difficult when the KTP system is looking for a project mapped out at the beginning. I understand that the KTP project allows for changing of the objectives over the course of the project but even this may not be flexible enough for the needs of a company on the cutting edge of technology.

<p>Project Effectiveness</p>

- 6.** Describe what additional resources would, in your opinion, need to be deployed in the future to achieve maximum benefit from your project.

I believe there is a great deal of research and development required to maximise the potential benefits from the platforms developed as part of this project. In addition, as these platforms grow, the need for strict quality assurance will become paramount. I believe that this project would benefit from at least three full time developers, one of whom would be dedicated to testing new functionality and assuring quality. This level of resourcing would provide rapid development of value added features whilst ensure no change in the level of quality. I would argue that a short period of research could establish that this strategy would pay off. I fear that the project will be put into a 'maintenance phase' after completion of Phase 3 and that much of the potential of the work we have done will not be realised. In addition resources need to be invested in suitable market research in order to identify key areas of need that can be addressed for maximum benefit and to differentiate the company from the growing number of competitors.

- 7.** Give an analysis of your project reflecting on the balance achieved between cost and quality.

The project was always relying on very tight timescales and 'early entry' to the market. I believe that this pushed us to release a system that originally was not suitable for public use. Overtime we responded to customer feedback and developed a better, more stable product. It is difficult to gauge the real cost of this in customer opinion, staff time for customer support and the effect on the future goals of the project.

We have learnt from those mistakes and are now more careful before releasing a full system, but I feel the emphasis still weighs too heavily towards speed and cost-saving sometimes at the expense of quality control. This is something that must be carefully monitored in the future.

As I have already mentioned given the size of the project some time and money needs to be invested in a dedicated quality control system with proper documentation and record keeping, this would likely require a dedicated resource that hasn't been involved in the project thus far.

<p>Project Closure</p>

- 8.** Accurate and complete records and documents relating to your project should be provided to ensure the satisfactory closure of your project. List what documents you have lodged with whom in connection with your project.

The project is on-going and will continue to be developed. Design documents have been lodged with the company for the initial system and the further phases. In addition handover documents have been lodged with the remaining developers covering all aspects of the platforms involved.

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Project Closure

- 9.** Describe what you have done additionally to ensure that your host company will be able to take advantage of your project work after it closes.

As previously mentioned the project is on-going and customers are using, and will continue to use, the platforms that I have helped to create. In the last six weeks of my project I have attempted to implement the core of the Phase 3 state system which is a major upgrade to the central functionality of the project and has a 'ripple-out' effect by forcing many previously less-than-perfect functionality implementations to be upgraded to a new and supportable system.

Formal Training

- 10.** Give brief details of training courses/activities in which you participated during your Associateship. For each of these, give the duration and describe what you learned.

Training/activity and duration	What you learned
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TCS Module 1&2 (8 days)

Strategies for time management, dealing with conflict, communications and effective personal development

TCS Module 3 (4 days)

Structure and organisation of small companies

Art of Leadership Seminar (2 days)

Modern leadership strategies and techniques

Think Customers Training (1 day)

How to think from a customers perspective and to use this to provide a better service

Enter here the total number of days spent on formal training during Associateship.	15
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Publications

11. Give details below of any papers, based on your work during your Associateship, which you have published or intend to publish.

Where was/will it be published? (please tick)				
Title, date and reference of paper	Refereed journal	Other journal	Conference/ seminar proceedings	KTP seminar proceedings
Total number of papers:				

Academic Qualifications Acquired

12. Did you have a higher degree before you became a KTP Associate? Yes ☐ No ☒

13. Did you register for a higher degree during your Associateship? Yes ☒ No ☐

If you answered 'Yes' to question 13 please continue, otherwise move on to question 19.

14. What higher degree did you register for?

MSc ☐

MBA ☐

PhD ☐

MPhil ☒

Other ☐

If 'Other', please specify here.

15. On what basis was/is it to be achieved?

KTP work ☐

Other work ☐

Both ☒

16. How was/is it to be achieved?

Thesis ☒

Work-based Learning or Negotiated Learning Contract ☐

Written examination/dissertation ☐

Other ☐

If 'Other', please specify here.

17. Did you complete the higher degree during your Associateship?

Yes ☐

No ☒

If 'No', please continue. If 'Yes', move on to question 19.

18. Are you still registered for a higher degree?

Yes ☒

No ☐

If you are still registered, when do you anticipate finishing?

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Within 3 months ☐

Within 6 months ☐

After 6 months ☒

Professional Development

19. Were you a member of a professional institution before your KTP Associateship? Yes ☐ No ☒

If you answered 'Yes', please continue, otherwise move on to question 24.

20. What was your level of membership at the time you became a KTP Associate?

Student ☐

Graduate ☐

Associate ☐

Corporate ☐

Other ☐

If 'Other', please specify here.

21. Has your level of membership changed during your Associateship? Yes ☐ No ☐

If 'Yes', please continue. If 'No', move on to question 24.

22. What is your level of membership now?

Student ☐

Graduate ☐

Associate ☐

Corporate ☐

Other ☐

If 'Other', please specify here.

23. Was the increase in your level of membership mainly due to your KTP work? Yes ☐ No ☐

24. Of which professional institution did you become a member during your Associateship?

BCS ☐

CIM ☐

IChemE ☐

IEE ☐

ICE ☐

RSC ☐

IMechE ☐

Other ☐

Chartered Management Inst ☐

None ☒

If 'Other', please specify here.

For all choices other than 'None', please continue. If 'None', move on to question 30.

25. Please indicate your level of membership.

Student ☐

Graduate ☐

Associate ☐

Corporate ☐

Other ☐

If 'Other', please specify here.

26. Did you become a member primarily on the basis of your KTP work? Yes ☐ No ☐

27. Did you pursue chartered professional status during your Associateship? Yes ☐ No ☐

If 'Yes', please continue. If 'No', move on to question 30.

28. Did you achieve chartered professional status during your Associateship? Yes ☐ No ☐

29. If you have not yet achieved it, do you intend to continue? Yes ☐ No ☐

30. Please indicate your final gross annual salary as a KTP Associate.

£15,000 - £18,000 ☐

£18,001 - £21,000 ☐

£21,001 - £24,000 ☒

£24,001 - £27,000 ☐

£27,001 - £30,000 ☐

£30,001 - £33,000 ☐

Over £33,000 ☐

31. Have you been offered a job by the host company? Yes ☐ No ☒

32. Please indicate where you intend to work after your Associateship.

Stay with host company ☐

Join another company ☒

Join an Education Institution ☐

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Don't know ☐

Other ☐

33. If your future employment is known, what is your new job title?

Software Design Engineer

Professional Development

34. Please indicate the level of the gross annual starting salary in your new post.

£15,000 - £18,000 ☐

£18,001 - £21,000 ☐

£21,001 - £24,000 ☐

£24,001 - £27,000 ☐

£27,001 - £30,000 ☒

£30,001 - £33,000 ☐

Over £33,000 ☐

Not yet agreed ☐

If not yet agreed, state what you expect it to be.

£

NVQ in Management

35. Did you register as a candidate for the NVQ (Level 4) in Management?

Yes ☒

No ☐

36. If 'No', please state why not, then move to question 41. If 'Yes', move to question 37.

37. Were you awarded an NVQ (Level 4) in Management whilst an Associate?

Yes ☐

No ☒

38. If 'No', please indicate the units which were credited to you whilst an Associate.

A2 ☐

A4 ☐

B2 ☐

C2 ☒

C5 ☒

D2 ☒

D4 ☐

F2 ☐

F4 ☐

F6 ☐

F7 ☐

G2 ☐

G3 ☐

If there were others enter them here.

39. If you registered for the NVQ (Level 4) in Management, please comment on the effect that undertaking it had on the development of your management skills and understanding.

Although the skills used in the NVQ were mostly skills I used in my day to day work, having to keep effective documentation forced me to consider my use of these skills and improve upon them.

40. Do you intend to work towards becoming a Chartered Manager?

Yes ☐

No ☒

Views on KTP

41. Please indicate the level at which you feel your KTP experience has helped your professional development.

High ☐

Medium ☐

Low ☒

Nil ☐

42. Please indicate the level at which you would recommend KTP to others who might become KTP Associates.

High ☐

Medium ☒

Low ☐

Nil ☐

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- 43.** Please suggest improvements to KTP that you feel would be particularly beneficial. Please also use this space for any general comments you wish to make.

Overall I enjoyed my KTP experience and my reasons for moving on early were not connected to the KTP program.

There are a couple of things that could perhaps have been done differently, most importantly a great deal of the early objectives had been satisfied by the time I started my employment there and it may be necessary to build more support in the KTP system to allow the project to be re-assessed at the time of the hiring an associate.

Apart from that there may be scope for the KTP scheme to be more flexible in allowing changes to the project as time goes on. In a project such as this one, particularly for a company this size it's impossible to plan for more than a few months in advance. This made it difficult to fit work into the stated KTP objectives, and even difficult to predict future objectives at each LMC meeting due to the way meetings are arranged and organised.

Associate Signature

This Associate Final Report should be submitted at the end of your Associateship. If this is not possible please inform the Final Report Administrator (Tel: 01367 245207).

Please sign and print your name below and give a copy to your Knowledge Base Supervisor (this report will form part of the overall Knowledge Transfer Partnership Final Report). Send the original to:

KTP Central Office, Brunel House, Volunteer Way, Faringdon, Oxon, SN7 7YR

Associate Signature

Date

16/08/2004

Print name in full

Colin Cameron

Please provide your current correspondence address.

Address

Flat 1F2
Easter Road

Town Edinburgh

Postcode EH6 8LH

Tel: No. 0131 553 5495

E-mail Address ccameron@blueyonder.co.uk

Future Correspondence

We would very much like to keep in contact with you and to continue supporting your professional development by providing you with information and contacts within the KTP community. Are you content for us to do so?

Yes ☒

No ☐

Do you wish to receive the Partnership Newsletter?

Yes ☒

No ☐

A KTP Associate Certificate will be issued to all Associates who return a completed Final Report and have completed at least 75% of their Associateship.