



The Client

sQuidcard is a subsidiary of Nucleus Limited, a leading brand, internet and venturing business. sQuidcard is set to become the leading alternative to the debit and credit card networks for sub £10 tap-and-go transactions. sQuidcard has a multi-purse capability and is the only ITSO compatible card that combines an eMoney purse. sQuid is rolling out its eMoney and Transit network across the UK and is already working with local Council's, transit operators, schools, colleges and Universities.

Applied Card Technologies Ltd is an independent UK company specialising in the design, development, installation and operation of smart card transaction systems. It provides turn key solutions and services to the retail, hospitality, transport and tourism markets world-wide. ACT smart card systems and services support around 8.1 million smart card holders, in the Republic of Ireland, United Kingdom, Europe and USA across a managed smart card POS estate exceeding 135,000 terminals.

Without the Grid-Tools data generation product, the tight delivery dates for the sQuidcard project could certainly have slipped.

CASE STUDY

THE PROBLEM



sQuidcard needed a tool that would enable them to vigorously test their new venture- an e-money alternative to the debit and credit card networks.

THE SOLUTION

sQuidcard selected Grid-Tools to work closely with ACT, a specialist in the area of designing, developing, installing and operating smart card transaction systems. sQuidcard chose Grid-Tools to automate the process of creating quality test data, which allowed a parallel approach to development and testing within this project.

THE SATISFIED CUSTOMER

sQuidcard- fast becoming the leading alternative to the debit and credit card networks.

 **Grid-Tools were able to provide a tool to automate the bulk of the work, and deliver it in an appropriate timeframe at a reasonable cost.** 

The key problem

sQuidcard were faced with the challenge of launching an e-Money alternative to the debit and credit card networks, which could potentially handle millions of customers and transactions. Experts predict rapid growth in this market, with sQuidcard well positioned to replace some of the £200bn sub-£10 cash transactions made each year in the UK. The main problem was a tight development schedule, and the need to test the solution rigorously. The testing had to simulate a situation where sQuid had been in existence for a number of months, or years.

“When rolling out a solution of this complexity,” explained Richard Buckley, Technical Director of Applied Card Technologies Ltd (ACT), “to millions of card holders and potentially handling tens of millions of transactions a year, you have to be certain that the data underlying the system is tested to the limit.” sQuidcard neither had the time to key this data by hand, nor the capability to generate realistic data on a large scale to test the system under a diverse range of scenarios.

The right choice

sQuidcard selected Grid-Tools to work closely with ACT, a specialist in the area of designing, developing, installing and operating smart card transaction systems. sQuidcard chose Grid-Tools to automate the process of creating quality test data, which allowed a parallel approach to development and testing within this project. This meant developers could work on other stages of the project, without having to wait for the preceding stages to be completed. sQuidcard was in need of a tool that could create test data and populate a database in a short timeframe. “Using Grid-Tools allowed us to meet our deliverables too,” commented Richard Buckley. “Without the Grid-Tools data generation product, the tight delivery dates for the sQuidcard project could certainly have slipped.”

There were no easy alternatives to the Grid-Tools approach. “One way would have been to use custom scripts to generate the data, and code into those scripts rules that would express the relationships differently,” explained Richard. Grid-Tools were able to provide a tool to automate the bulk of the work, and deliver it in an appropriate timeframe at a reasonable cost. “What the tools offered is greater scalability,” said Richard. “Using them, we

were able to change a couple of parameters and generate many millions of transactions.” There were also unforeseen advantages that emerged from the project. Richard explained: “The other advantage was that we got an external, very neutral view of our data model. Huw Price, Grid-Tools’ Technical Lead, was able to provide some comments back to us on our data model, which was also like a peer group review.”

A satisfied customer

ACT and Grid-Tools quickly established a strong working partnership on the project. “Huw of Grid-Tools is a technologist like me, and we were able to talk in the same language,” said Richard. “Grid-Tools were allowed secure access to our development database and were able to work remotely. They had the appropriate tools for working within the restrictions of our network and understood our security precautions.” ACT benefited from using a trial version of the Grid-Tools software, commented Richard: “we were able to become familiar with the tool, and understand its effectiveness in the context of sQuidcard’s specific data model.”

Although time restrictions within the project meant that ACT was not able to exploit the Grid-Tools software to its fullest, Richard could see many future uses: “Once the system is live, we can use the tools to assess how the system would scale up to ten million card holders.” The advantage would be to use representative data of the smaller database to simulate the activity sQuidcard can expect with much higher volumes of card holders. The system is currently in early pilot, but it is anticipated that the business will scale up to handle over a million card holders. “Of course we want to make sure that the database can handle these kinds of volumes before it reaches that level,” commented Richard.

Grid-Tools solution may also have an application in later stages of the project. “I can see the Grid-Tools software being used in a predictive way,” explained Richard. “It would be useful to have the ability to second-guess what the data entries and model might look like in twelve months time.” Richard concluded: “We have to get our team familiar with the tools, and use them to simulate real life scenarios. It would be incredibly powerful to be able to create a scenario that mimics the behaviour of real customers, and on the registration side, to use the tools to simulate not just the database, but the application code above it.”

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