LEAVING REVIEW

Employee Name: Jenny Yang

Review Due Date: 9 Sep 2016

Review Held Date: 31 Aug 2016

Manager: Alexander Hermes

1. BACKGROUND

This is Jenny's leaving review, covering her 10-week internship in the Support Projects team this summer. Jenny joined us between her second and third years of undergraduate study at the University of Oxford, where she is reading a 4-year Master's degree in Philosophy & Computer Science. Jenny has done quite a bit of programming before, both as part of her degree and in her spare time, but this was her first time working in a professional development environment.

2. TASKS UNDERTAKEN

As well as undertaking several small and useful enhancements Jenny has tackled the following major projects, covering a range of technologies and challenges.

- **EAS capacity metrics in the dashboard:** this involved the creation of a new portion of the Metaswitch dashboard that allows customers to see the capacity data of their EAS systems – something that is regularly asked for and that, to date, always required L3 involvement.

  As this project was developed as a new feature within an existing large framework it meant that she had to navigate through and understand a complex codebase in order to correctly fit in her new portion. Furthermore, as both the end "customer" and the provider of the back end API this project were in a different team, this project challenged her ability to effectively communicate and coordinate with other teams.

- **Upgrade Analyser data entry page:** this green field project involved the creation of an entirely new website to replace the current, issue-based way that data for upgrade analyser warnings is stored. Since there was no existing code or user interface that this project needed to fit in, this project provided a test of Jenny's ability to take a set of high level requirements and turn them into both an effective (and attractive!) user interface. It also meant developing code from scratch, and therefore establishing good practices and coding patterns in her work.

- **Resource tracker google sheet integration:** as part of the larger resource tracker ("TRAFFIC") project, Jenny developed a python component to integrate google sheets into the resource tracker. As well as having to learn a new programming language, Jenny had to ramp up on a fairly complicated 3rd party API and integrate it with the existing code base.

- **Data-driven conditions:** Jenny designed and implemented a new, data-driven way of checking MetaTracker data against set of arbitrary conditions. This was the first time Jenny had worked with T-SQL, or indeed databases in general, which require a different logical approach than the procedural languages she previously had experience with.

3.   PERFORMANCE, SKILLS AND CHARACTERISTICS

Jenny has had a very successful internship period, and enjoyed her time here much as we've enjoyed having her. She performed well above even the high expectations that we had of her.

- First and foremost, Jenny ramps up and delivers remarkably quickly, even accounting for her programming experience. With little exception, the technologies she used in her projects were new to her, yet she was able to grasp them rapidly and complete her projects well ahead of time – in fact, we had expected her to take most of her internship to complete the EAS Capacity Metrics project but she finished it in just a few short weeks!

   All-in-all Jenny delivered over twice the amount of work we'd been expecting during her internship – which has been hugely beneficial to the team.

- Jenny enjoys working on a range of different projects using a variety of programming languages and frameworks – indeed, while tasks in Support Projects covered Javascript, Python and T-SQL her *Vacathon* project undertaken with fellow Oxonians was written in pure Haskell (!).

- Across this range of projects she has shown a good ability to keep track of all the details of the tasks assigned to her using a variety of digital (and analogue) note taking tools, and execute on each of them - I have not had to remind or chase her at all. This is a valuable skill and bodes well for her future.

- I have been particularly impressed by her ability to come up with good visual design solutions to the various user interface problems she encountered. This is a deceptively difficult area to master, but Jenny enjoys this kind of work and it shows in the user interfaces she designs!

- Jenny has a strong ability to work independently without needing a great deal of instruction or hand-holding. She is quick to find solutions to her problems, or, where no obvious solution presents itself, find a workaround.

   Sometimes, however, this independent streak has meant that she has forged ahead with an approach that, upon review, turns out not to be the best solution. For example, while her decision to introduce a new CSS library as part of the upgrade analyser work did solve her immediate problem, it turned out that this library was not as well documented as the standard approach we used elsewhere.

   Going forward, I would encourage her to seek more feedback on her important design decisions as a balance to her autonomous approach.

- Jenny's naturally very quiet and can come across as shy – but she's good in conversation and happy to be forthright with me and we've built a good working relationship.

Jenny's communication tends to be on the laconic side, which has both positive and negative aspects. On the one hand, I have often had to encourage her to provide feedback and communication, but on the other, where she communicates, she is pleasingly concise and to the point. Frequent communication is an important part of being successful, so a key challenge for Jenny in future is to get more comfortable with communicating proactively.

Overall, Jenny has done a great job of taking all the challenges thrown at her and mastering them, and as she develops the soft skills outlined in section 5 I have no doubt she will become an outstanding software engineer.

4.   CAREER PATH

Jenny is excited about a career in software and has expressed a desire to explore some of the more algorithmic and mathematical aspects of software engineering, tying in her studies in computer science. Within the context of Metaswitch, she was particularly interested by the careers' presentation given by the NST (formerly NBU), so a role in this unit would be a good fit.

Jenny hasn't yet decided what she'd like to do next summer – she has enjoyed her time at Metaswitch but said she's also interested in trying an internship at a different company next year.

5.   KEY AREAS FOR DEVELOPMENT

Wherever Jenny's career takes her, her next steps should involve developing her "soft" skills in parallel with the technical side, in order to maximise her potential.

1. **Proactive communication:** as outlined in section 3, Jenny would benefit from speaking to her colleagues more readily, particularly in seeking and providing feedback on her (and others' work). Software engineering is a collaborative process and sharing ideas is a hugely effective way to make the "right" decisions.

2. **Higher level ownership of deliverables:** the next stage in her development is for Jenny to own more and more of the process of turning a project idea into a concrete delivery. In particular, successfully generating and agreeing requirements with external stakeholders is a real challenge and something that she's had limited experience with.

3. **Estimating, planning and tracking:** Another important part of working with external stakeholders is to estimate, plan and track projects and flag any changes or issues at an early stage. Jenny should now look to extend her rigorous personal tracking to be able to create plans, commit schedules to others and give them visibility into the project status.

6.   BONUS

Jenny has performed exceptionally well in her internship and we would love to have her back at Metaswitch again next year. In recognition of this performance, we are offering her a sponsorship of £2000 for the year, if she accepts our offer to return next summer.

7.   JENNY'S COMMENTS

I have really enjoyed working on a variety of projects and learning different frameworks. In this internship I have always had clearly structured work to do, which works very well for me. I don't do as well in a less structured environment, like working in a team where I am more responsible for managing myself (e.g. hackathons). I think doing more team work of this kind would be good for developing my communication and other skills. Similarly, I think responding to requirements would be a good skill for me to develop (as mentioned above).

The work I've done has been interesting and helped me to learn a lot. I like understanding how my projects fit into the bigger picture and help the rest of the organization. I liked the freedom I had over my work, such as making web pages from the angular template, and designing my own solution in the Data-Driven Conditions project. I hope the work I've done will be helpful to the team and easy to maintain ☺

8.   ALEX'S COMMENTS

Jenny and I had a pleasant discussion about the review without any major new areas of concern brought up. On skills development we both agreed that we could have challenged her tracking /estimating ability more, but that in any case this was an absolutely logical next area to develop.

At a personal level, I've really enjoyed working with Jenny, though I had to struggle to keep up the flow of work in the face of her remarkable delivery speed! As a first time manager, I was am very happy to hear that she enjoyed the environment and tasks we provided here in support projects – thank you for the praise. And as for code quality – having seen her code through several reviews, it is indubitably of professional quality and indeed outstrips much of our existing code base in maintainability and clarity.

I am hopeful we will be seeing Jenny again at Metaswitch, but in any case, I wish her all the best with her studies and beyond!