

Appendix to  
Transitioning from Closed Source to Open Source:  
Analysis and Observations from Six Projects

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# Appendix to Transitioning from Closed Source to Open Source: Analysis and Observations from Six Projects

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## ABSTRACT

This document contains the questions in the surveys and interviews used in our study of transitions to open source software at Microsoft.

## APPENDIX

### A.1 Interview Guide for Developer Interviews

1. Context – Experience at MS
2. Context – Experience in open source
3. Were you here when the transition happened? IF yes, how was the transition? What did you have to do for the transition.
4. What are the top three positive and negative things about the system after it went open source (in terms of the process)
5. Tell us about testing before and after the transition.
6. How has the community reacted to the release (receptive/hostile/missed)?
7. What would you do (or would like to do) if you were able to do this retrospect
8. Do you think this project benefitted from becoming open source? How has it benefitted and what have been the drawbacks?
9. How has the “repository data” changed in terms of churn, bugs, etc.

10. How has the transition affected the stability of the system?

11. What advice do you have for teams thinking about transitioning to open source?

12. Level playing field of hierarchy

13. Tell us about your thoughts regarding using CodePlex for open source projects.

14. What have been the implications of going open source on security.

### A.2 Interview Guide for Management Interviews

1. How long have you been associated with the project?
2. What is your role in the project?
3. What were the factors driving the decision to transition the project to open source?
4. Please walk us through the process of transitioning to open source.
5. What have been outcomes related to transitioning to open source that are unanticipated or surprising?
6. Tell us about the state of the project now that it has transitioned to open source.

### A.3 Survey Questions for Developers

We are researchers in Microsoft Research who are studying the transition of Microsoft projects from being closed source to open source. Your opinions/suggestions will help other Microsoft projects planning to go open source. We would be greatly appreciative if you would be willing to take the survey. The survey should take less than 15 minutes. Thank you!

This survey is anonymous. No personal information will be collected. Aggregate information may be shared with research collaborators outside of Microsoft and used in publications. We selected you because of your contributions to one of the Microsoft's open source projects. Please contact nachin@microsoft.com or tzimmer@microsoft.com if you have any questions about this research project.

As a thank you for your time, you can enter your name into a raffle of two \$50 Amazon.com Gift Certificates after the completion of the survey (official rules of the sweepstakes).

Thanks,

Pavneet Singh Kochhar (t-pakoc), Nachiappan Nagappan (nachin), Thomas Zimmermann (tzimmer), and Christian Bird (cbird).

#### Demographics

1. How many years have you been at Microsoft? (numeric)
2. What is your current role at Microsoft? (open response)
3. Do you have experience contributing to any open-source software outside Microsoft? (yes or no)
4. Please briefly explain which open source projects you have contributed to and for how long (open response)
5. Please select all open source projects that you contribute to (choices are all projects in the study and open response)

For all questions below, please answer from the perspective of the project that you contribute to the most

6. Were you in the team at Microsoft when the transition from closed source to open source happened for your project? (yes or no)
7. What were the reasons to open source the project? Please indicate whether you agree with the following statements. (likert from strongly agree to strongly disagree and not applicable)
  - a. To help build trust and increase confidence with countries or organizations as they can see what the source code does.
  - b. To engage and build trust in the community.

- c. To generate business opportunities for other projects in the organization.
- d. Easy access to resources such as new contributors and support for tools
- e. To develop open source culture at Microsoft
- f. To help find and hire potential employees.
- g. To help developers in Microsoft write better code and become better coders/testers.
- h. To Receive faster feedback from the community

8. What were some of the important steps before the transition? Please indicate whether you agree with the following statements. (likert from strongly agree to strongly disagree and not applicable)

- a. Writing documentation
- b. Changing to a new test framework
- c. Changing the build system
- d. Providing resources to mirror back the code from GitHub to TFS.
- e. Providing resources to enable cross platform support
- f. Marketing about the project like writing blog posts.
- g. Sanitizing/Cleaning the source code

9. What were some of the some of the outcomes of the transition? (Part 1) Please indicate whether you agree with the following statements. (likert from strongly agree to strongly disagree and not applicable)

- a. Testing became harder as the test cases need to be moved or re-written to a different test framework.
- b. Some external contributors only write test cases.
- c. Testing became harder as some of the internal tools are not available.
- d. I like using Git over TFS for version control.
- e. TFS item tracking is better than issue tracking in GitHub.
- f. I would prefer using CodeFlow than GitHub for code reviews.
- g. I would like to see the complete file with the changes rather than the diffs while doing code reviews on GitHub.
- g. Git is faster than TFS.
- h. External contributors are required to submit test cases along with their pull requests.
- i. Git has a higher learning curve than TFS.

10. What were some of the some of the outcomes of the transition? (Part 2) Please indicate whether you agree with the following statements. (likert from strongly agree to strongly disagree and not applicable)

- a. Only internal developers have the right to merge the pull requests.
- b. Open source tools have better support than internal tools.
- c. The quality of the software has improved.
- d. Build system is simpler than it was internally.
- e. Number of bugs reported have increased.
- f. Managing pull requests is easier on GitHub than internally.
- g. Continuous Integration can help detect merging issues early and easily.

h. Agile process in the open source has made it easier for external developers to contribute.

11. What were some of the some of the outcomes of the transition? (Part 3) Please indicate whether you agree with the following statements. (likert from strongly agree to strongly disagree and not applicable)

- a. GitHub Markdown lacks some features such as support for writing equations.
- b. My project is maintaining two copies of the source code – internal and external.
- c. It's complex to manage permissions using GitHub's permission system.
- d. It is better to make projects open source early on in the life cycle.
- e. Build breaks happen more often internally than externally on GitHub.
- f. GitHub is the right place for the project due to big community.
- g. Managing multiple copies of code, i.e., internally and externally can be troublesome.
- h. GitHub provides a tighter feedback loop due to a big community.
- i. GitHub is good for small pull requests but not for large pull requests.

12. How has the response been from the community to the transition? (Part 1) Please indicate whether you agree with the following statements. (likert from strongly agree to strongly disagree and not applicable)

- a. Community members were eager to submit their first pull request.
- b. Community members are excited about the project going open source.

c. Community members are actively using social media like Twitter to express their excitement.

d. Community members submit pull request which are not useful/relevant and do not satisfy business concerns for the project.

e. Community members take up leadership roles, for example, to take a task or organize meetings etc.

f. Community members are very active.

13. How has the response been from the community to the transition? (Part 2) Please indicate whether you agree with the following statements. (likert from strongly agree to strongly disagree and not applicable)

- a. Some external contributors have gained recognition in the community.
- b. News website like Hacker News actively published before and/or after project was open sourced.
- c. My project team asks some open-source developers to solve issues.
- d. Community members provide useful and timely feedback.
- e. Too many contributions from the community members are difficult to manage.
- f. My project does not follow a hierarchical structure of contribution such as developers have to first earn the privilege to submit changes.
- g. My project team publishes design meeting notes on GitHub.

14. Please share any other experiences or learnings about the transition process to open source, reasons for transition, its outcomes and the community response. (open response)