DEVELOPERS' PERCEPTION OF PRODUCTIVITY

The following document shows the interview protocol of our semi structured interview.
Please feel free to contact Thomas Fritz at fritz@ifi.uzh.ch if you have any further questions.

Interview Protocol

Hi …,

Thank you for participating. The aim of this interview/study is to better understand how developers perceive and reflect on their productivity, if at all, and is based on the survey results from 380 software developers. Our aim is to eventually create tools to help you better reflect on your development work.

General:
What best describes your primary work area?
      [Development, Test, Project Management, Other Engineer, Other Non-Engineer]
Which of the following best describes your role?
      [Individual Contributor, Lead, Architect, Manager, Executive, Other]
How many years of software development experience do you have?
How many years of professional software development experience do you have?

Productivity:
1. Do you ever consider whether you were productive on a given day?
2. If so, how do you determine or reflect on your productivity?
3. Do you ever consider productivity over longer periods of time, for example, a week, a month, a sprint?
4. If so, how do you determine or reflect on your productivity?
5. What days do you think were most productive last week and why?

Work Items:
6. Are you working on work items each day and are you using a tool for managing your work items? [if not clear from the observation]
7. You worked on several/one work item during the observation sessions, is that common, or what is a usual day for you with respect to work items?
[if we don't have the number of work items they resolved over the past weeks and the code check-ins they made, ask them if they can query for it]
[have them look at the list/visualization of work items.]
8. Is the number of work items you resolve in a week a good indicator of your productivity? (why / why not) [e.g. on Wednesday, you completed the most work items. Was this your most productive day of the week?]
9. In general, does the number of work items help you to understand your productivity? If yes, how? Can you expand on your productivity last week and relate to work items when possible?
10. Do you look at the number of work items you resolve at the end of a day or week?

11. What influences the number of resolved work items?
12. Is the number of code check-ins you make in a week a good indicator of your productivity?
13. Is the number of code check-ins you make in a day a good indicator of your productivity?
14. Do you look at the number of code check-ins you make at the end of a day or week?
15. Does it help your productivity if work items are planned beforehand?
16. How do unplanned work items/todos influence your productivity?
17. Do you create or update a list of TODOs / goals for every day / week?

Meetings:
18. During the observation study you were in no/some meetings, is that representative. Could you maybe look at your calendar and tell me how many meetings do you have for the past work week (5 days) and how long are they on average?
19. Is that a representative number or were the past 5 days particularly hectic or quiet?
20. How many informal meetings do you typically have in a day or week that are not captured in the calendar?
21. How long are these informal meetings usually?
22. If you look at your calendar, are there examples of meetings that you consider productive and why?
23. Are there examples of unproductive meetings and why do you consider them as unproductive? (e.g. # of participants, duration, duration of planning, status/administrative/…, …);
24. How about the informal meetings, when are they rather productive or unproductive and why?
25. How many meetings do you consider reasonable for a single day and is there a number when they start to really decrease your productivity?
26. Do you schedule time for working by yourself in your calendar?
27. [if observed] You got a meeting invitation (notification) during the observation. Do you get a lot of these? How do you decide whether to accept or reject a meeting invite?
    [if not observed] Do you get a lot of meeting requests (notifications)? How do you decide whether to accept or reject these?
28. How do you decide whether or not it's worth it looking at the meeting request and interrupting your work flow?
29. When / how do you usually handle these incoming requests?

Emails:
30. How many emails to you approximately receive in a day?
31. How do you typically handle emails? Do you use any techniques to handle the emails, e.g. do you have any filters or other rules set up?
32. How much time do you spend on checking and answering emails each day?
33. When do you consider handling emails productive, do you have any examples?
34. When do you consider handling emails unproductive, do you have any examples?
35. How often do you check your emails?
36. Do you try and block the handling of your emails or do you try and answer every time a new email comes in?
37. [if observed] You got an email notification during the observation. How do you decide whether to look at it or not?
    [if not observed] Do you have email notifications turned on? If you get an email notification, how do you decide whether to look at it in more detail or not?

38. Do you have any other notifications turned on and how do you handle those (e.g. Twitter, Facebook,…)?

Context Switches
39. Do you consider the last session productive? Why?
40. How would you define a context switch in your work?
41. What are examples of context switches and what are the reasons for context switches?
42. Could you give me a concrete example of a context switch from the previous session?
43. Here is a quick overview of the activities we noted together with the context switches. Is that accurate or are there any context switches missing or should not be considered as such?
44. Do you think that you usually have more context switches than in the observed session or are these representative?
45. Are there cases in which context switches are necessary and beneficial?
46. Are there cases in which context switches are bad?
47. Is the number of context switches you experience related to your productivity (e.g. the more switches, the less productive you are)? (Do you consider periods with fewer context switches more productive?)
48. Do you consider times in which you have no switches and are focused on one task particularly productive? How long are these periods of focus for you usually (if not interrupted)?
49. How important is it for you to work on only one task at a time? (i.e. now interruptions, no multi-tasking)
50. In your own opinion, how long can a context switch (e.g. an interruption) be, without majorly harming your productivity? [to find out if every interruption is a hard CS, or only after e.g. 1 minute]
51. Are you trying to avoid context switches and if so how?
52. How do self-interruptions (e.g. switching to a non-work related website such as a news web site) influence your productivity?
53. What else affects your productivity?

More General (if there is time):
39. From the survey we see, that motivation, happiness, mood and concentration increases the productivity. Do you agree, why and is there anything you do about it?
40. How does having good and enough sleep influence your productivity?
41. What influence has your working environment (e.g. infrastructure, work place, self-destined working times) on your productivity?
42. How do deadlines and time pressure affect you and your productivity?