Non-programmers guide to FIB-SEM automation

M. Hrabovsky, Jiri Dluhos, Tomas Boruvka, Alena Siudova, Miroslav Jurasek
TESCAN GROUP, Brno, 62300, Czech Republic
milos.hrabovsky@tescan.com

The main challenge of automation of FIB-SEMs is that most users are not programmers, they can use some scripts, even edit them, but in general they do not have the capability to write them. Some choose to spend weeks even months learning the basics to create their scripts, some choose to ask colleagues to create ones for them.

To overcome this issue and really make the FIB-SEM open access for the users we utilized the technology of visual blocks with dedicated functionality to be placed inside an interactive background to create a script. This workflow allows any type of user with minimal training to prepare a script to either just select and ROI, set the conditions, collect images, and save them, to much more dedicated scripts using dedicated milling strategies for Ion Beam patterning combined with stage movements and gas injection.

And the best function for last, once the user is experienced enough and doesn't need the visual programing anymore, the whole visual code can be exported into python and edited in any python editor.

We strongly believe that this functionality will allow the FIB-SEM community to take full control of their systems and elevate their work to new levels.