PrintBot

Problem

The problem for students in science classes is that they are often too theoretical, the content is too abstract to understand and the content is too complicated and gets perceived as boring. Subsequently it is hard for the teacher to motivate their students for the theory of robotics, electronics and computer science.

There are already a range of other robots on the market. However, in existing products one relevant part is always missing — either the educational concept, there is no connection to electronics or there is no connection to the production.

Solution

We developed a concept in which we combine the fundamentals of robotics and 3D printing with a more interactive educational concept.

[1] The 3D model gets designed in a CAD software. Students can design every element on their own.

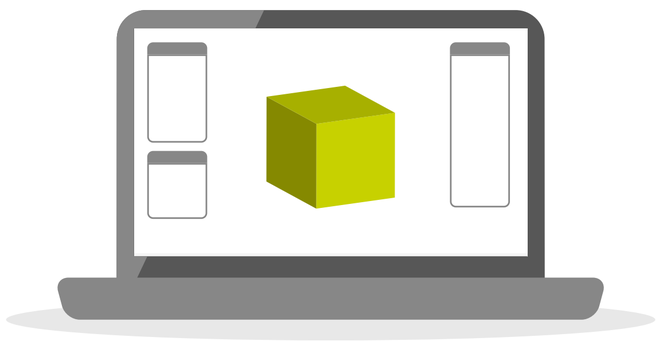
[2] The model gets 3D printed and the wheels get attached to the main robot. 3D printing, production and materials can be taught in chemistry.

[3] Eventually the students assemble and wire up the circuit board and learn about the fundamentals of electronics in a physics class. The circuit board is encapsulated in acrylic glass to take the fear of electronics away.

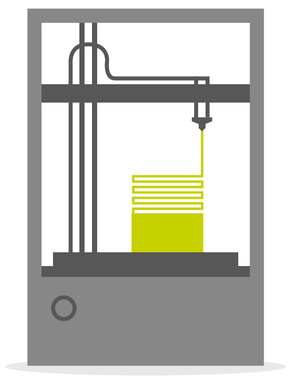
[4] The student will then use their smartphones to set up a project in our app and to create the source code logic by dragging and dropping visual blocks.

[5] Afterwards the code needs to be compiled and send to the PrintBot cloud computer.

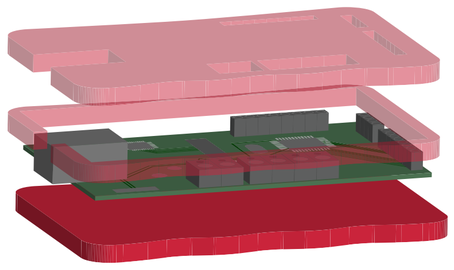
[6] Eventually the software gets send to the robot via Bluetooth.



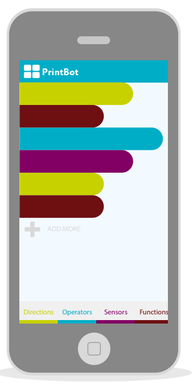
[1] Create 3d model of the robot



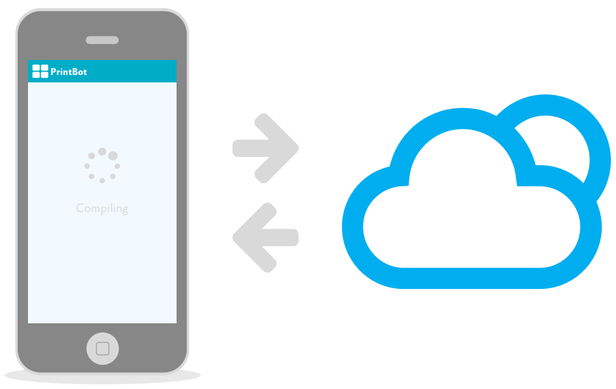
[2] Print and assemble robot



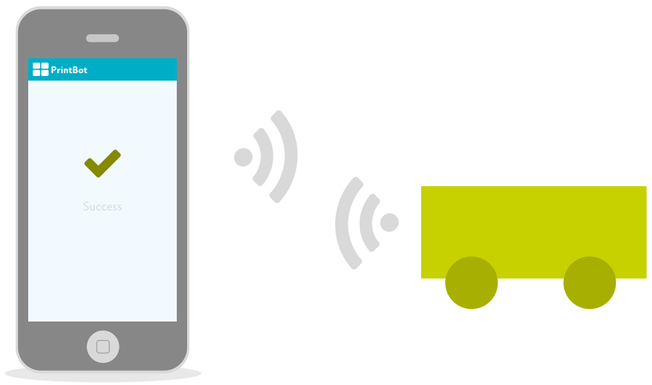
[3] Assemble and wire up circuit board with robot



[4] Set up a project and create source code logic



[5] Compile code and send to the PrintBot cloud computer



[6] Software sent to robot via Bluetooth

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MANY THANKS TO

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