Robotics with LEGO® WeDo (VI)

An introduction to robotics for the young with LEGO® WeDo

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In this part we will have a closer look at the blocks for sending and receiving messages.

The WeDo programming software contains two blocks that allow us to create much more advanced programs.

Send Message   Start on message

How does it work?

Try the following program:

You will see the following on the screen:

Breaking linearity

What has happened now is that the program is no longer linear, that is to say, it doesn't follow a single series of blocks, but it has been split in two. This allows us to create much more complex programs
Let's analyse the previous example:

In this first part of the program the message "a" is sent.

Here the message "a" is received, and screen background 1 is shown.

So then what is the difference between this and doing it without sending a message. Like for example:

If you run the above program you will notice it does exactly the same as the one using the message blocks. But the example doesn't show the real power of the message blocks.

Running programs simultaneously

One of the functions of the Send message and Start on message blocks is that it allows for simultaneous programs.

Starter program

This is the program that will send the order for the execution of several other programs. In this example our starting program will be as follows:
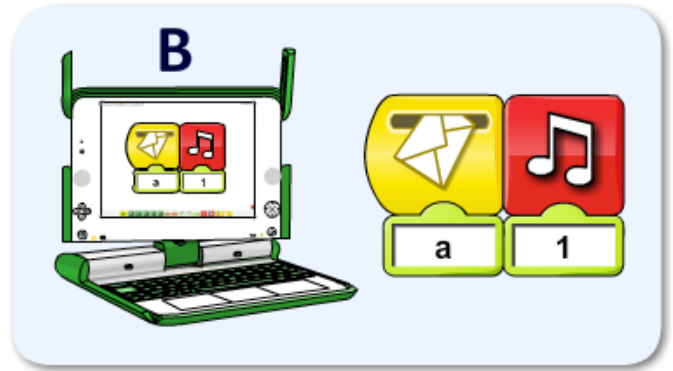

Simultaneous programs

Using the Start on message block we can create as many programs as we like that will be executed simultaneously. Following the example, we will make three programs that will run at the same time.

Note that the name of the message that is sent must be identical to the one received, including the use of capitals - it must be copied perfectly on both sides.

If you run the starting program you will see how all three other programs are executed simultaneously.

57

If you run the program on Computer A, you will see how it send the message "a", which is received by Computer B which will play sound 1.

As you can see, the Send message and Start on Message blocks also serve to interact between computers on the same local network.

In the next part of this tutorial we will see some more examples of the use of send and receive blocks and I will show you some more advanced programs that use these blocks.

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At notjustbricks.blogspot.com you can find multimedia materials (images, videos) of the creations of the author, some of which come with building instructions.

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Sending and receiving over a local network

One of the most important characteristics of the send and receive blocks is that they can be used over a local network. Take a look at the following example:
We have two computers connected to the same local network. On one we write a program using a send message block and on the other we create a program using the Start on message block. For example:

Computer A

58