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1 -----
2 --
3 --          GNAT RAVENSCAR for NXT          --
4 --          Copyright (C) 2011, AdaCore    --
5 --
6 -----
7
8 -- Abstract data type representing the NXT sound sensor
9
10 pragma Restrictions (No_Streams);
11
12 package NXT.Sound_Sensors is
13     pragma Elaborate_Body;
14
15     type Sound_Sensor (<>) is tagged limited private;
16     -- NB: by making the type indefinite, we force an initialization when
17     -- objects are declared, thereby ensuring a call to a constructor function
18
19     function Id (This : Sound_Sensor) return Sensor_Id;
20     -- Returns the sensor identifier assigned to this sensor
21
22     function Sound_Level (This : Sound_Sensor) return Integer;
23     -- returns the current sensor value as a percentage
24
25     procedure Use_DBA_Mode (This : in out Sound_Sensor);
26     -- causes This sensor to use DBA mode
27
28     procedure Use_DB_Mode (This : in out Sound_Sensor);
29     -- causes This sensor to use DB mode
30
31     function DBA_Mode (This : Sound_Sensor) return Boolean;
32     -- returns whether This sensor is using DBA mode. When it returns False the
33     -- sensor is in DB mode.
34
35 private
36
37     Max_Raw : constant := 1023; -- max reading from A/D converter
38
39     -- the raw input value varies inversely with the volume of the sound
40
```

```
41     type Sound_Sensor is tagged limited
42         record
43             Id          : Sensor_Id;
44             DBA_Mode    : Boolean;
45         end record;
46
47 end NXT.Sound_Sensors;
48
```