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1 -----
2 --
3 --          GNAT RAVENSCAR for NXT          --
4 --          Copyright (C) 2011, AdaCore    --
5 --
6 -----
7
8 -- A facility for removing noisy inputs, such as button pseudo-presses.
9
10 generic
11   type Sample_Value is private;
12   No_Value : Sample_Value;
13 package NXT.Filtering is
14
15   type Filter (Max_Samples_Required : Positive) is limited private;
16   -- A filter for removing noisy inputs that are detected by the
17   -- hardware but are not real inputs by a user. The discriminant is the
18   -- number of successive samples required for a detected input to be
19   -- considered a real input.
20
21   function Filtered (The_Filter : Filter; Latest_Sample : Sample_Value)
22     return Sample_value;
23   -- Returns the value that the user has actually input.
24   -- Returns No_Value if no input has been detected.
25   -- Updates the filter state accordingly.
26
27 private
28
29   type Filter (Max_Samples_Required : Positive) is limited
30     record
31       Detected          : Sample_Value := No_Value;
32       Previous_Sample  : Sample_Value := No_Value;
33       Detected_Count   : Natural := 0;
34     end record;
35
36 end NXT.Filtering;
37
```