GNAT RAVENSCAR for NXT

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with Interfaces; use Interfaces;
with System;

package NXT.Audio is
  pragma Elaborate_Body;

  procedure Mute;
  --  prevent sound from coming out of the speaker

  procedure Unmute;
  --  allow sound from the speaker

  Maximum_Volume : constant := 100;

  subtype Allowed_Volume is Integer range 0 .. Maximum_Volume;
  --  Zero is muted, i.e., no sound output

  procedure Play_Tone
    (Frequency : Unsigned_32;
     Interval : Unsigned_32;
     Volume   : Allowed_Volume);
  --  Plays a tone of the specified Frequency for the specified Interval.

  --  The min, max, and default frequencies used for playing input samples (as
  --  opposed to generated tones)

  Maximum_Rate : constant := 22_050;
  Minimum_Rate : constant := 2_000;
  Default_Rate : constant := 8_000;

  subtype Sampling_Rates is Unsigned_32 range Minimum_Rate .. Maximum_Rate;
procedure Play_Sample
  (Input : System.Address;
   Input_Length : Unsigned_32;
   Volume : Allowed_Volume;
   Rate : Sampling_Rates := Default_Rate);
-- Plays the sound sample starting at Input, of extent Input_Length. We
-- don't use an explicit array type for Input because in practice the input
-- values will come via the linker so the user won't know how big the array
-- should be. We don't use an explicit access type because that would
-- require the user to do the conversion from the address provided by the
-- linker, hence it would not be any safer and not convenient for the user.
--
-- The address provided by Input is expected to be the starting address of
-- a sound sample, such as that of a wav file. Note that only 8-bit PCM
-- values are supported.
-- Input_Length is given in terms of bytes.
-- The value of Rate should match what was actually used to create the
-- input sample, so when playing wav files the value specified should come
-- from the input wav file metadata. See NXT.Audio.Wav, for example.

function Time_Remaining return Integer;
-- Returns the approximate number of milliseconds remaining in the
-- currently playing tone or sample.
-- Returns zero when no tone or sample is playing.
end NXT.Audio;