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proc seEnojó? (in s: señal, in umbral:  $\mathbb{Z}$ , in prof:  $\mathbb{Z}$ , in freq:  $\mathbb{Z}$ , out result: Bool) {
  Pre {umbral > 0  $\wedge_L$  esSeñalAux(s, prof, freq)}
  Post {
    result = umbralEnRango(umbral, prof)  $\wedge_L$ 
    existeUnaSubsecuenciaQueSuperaUmbral(s, freq, umbral)}
}

pred umbralEnRango (umbral:  $\mathbb{Z}$ , p:  $\mathbb{Z}$ ) {umbral  $\geq 2^{p-1} - 1$ }
pred existeUnaSubsecuenciaQueSuperaUmbral (s: señal, freq:  $\mathbb{Z}$ , u:  $\mathbb{Z}$ ) {
  ( $\exists d, h : \mathbb{Z}$ )  $0 \leq d, h < |s| \wedge (d < h) \wedge ((d + freq * 1000 * 5) < h) \wedge_L ($ 
  ( $\forall i : \mathbb{Z}$ )  $0 \leq i < |subseq(s, d, h)| \longrightarrow_L abs(subseq(s, d, h)[i]) > u$ )}
fun abs (x:  $\mathbb{Z}$ ) :  $\mathbb{Z}$  = if  $x > 0$  then  $x$  else  $-x$  fi;

```