Wavedrom encoding diagrams

Sail source

```
default Order dec
$include <prelude.sail>
scattered union Instr

val encdec : Instr <-> bits(32)
union clause Instr = Add : (bits(5), bits(5), bits(5))

$[wavedrom REG3 dest ADD input input]
mapping clause encdec =
    Add(rd, rx, ry) <-> 0xFFFF @ rd : bits(5) @ 0b1 @ rx : bits(5) @ ry : bits(5)

union clause Instr = Sub : (bits(5), bits(5), bits(5))

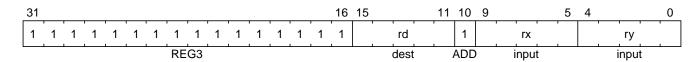
$[wavedrom REG3 _ SUB _ _]
mapping clause encdec =
    Sub(rd, rx, ry) <-> 0xFFFF @ rd : bits(5) @ 0b1 @ rx : bits(5) @ ry : bits(5)

union clause Instr = Xor : (bits(5), bits(5), bits(5))

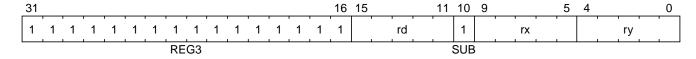
mapping clause encdec =
    Xor(rd, rx, ry) <-> 0xFFFE @ 0b1 @ rd : bits(5) @ rx : bits(5) @ ry : bits(5)
```

Result

The diagram for the Add clause:



The diagram for the Sub clause. Note how we can use underscores to skip labels:



The \$[wavedrom labels] attribute can be omitted, as with Xor:

