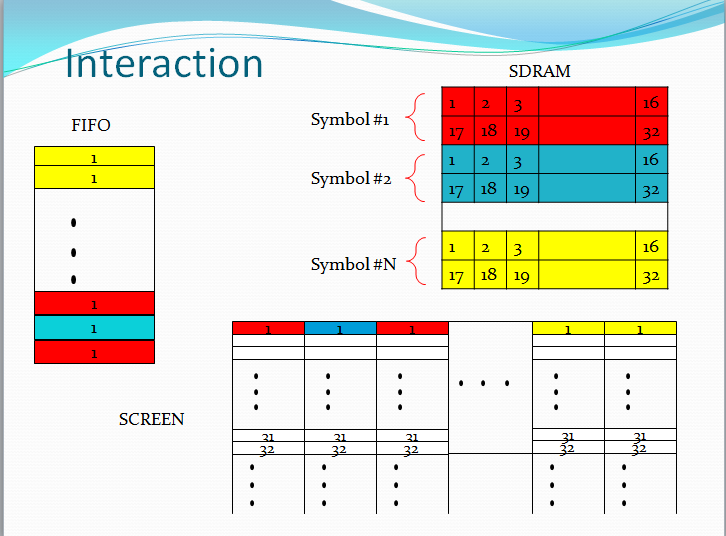
**Manage the read from SDRAM and feed the VESA block**

From our presentation:



The signals we will use:

**Sym\_row** = the row in terms of symbols, values: 0,…14

**Sym\_col** = the col in terms of symbols, values: 0,…,19

**Row** = the row inside the current symbol, values: 0,…,31

Analogy to:

For **sym\_row**=0 to 14

For **row**=0 to 31

For **sym\_col**=0 to 19

Getting the DATA from the RAM:

For a given **sym\_row** and **sym\_col** : RAM\_ROW <= 20\***sym\_row** + **sym\_col**;

Calculating the address in the SDRAM:

* If **row**=0…15 then we will use the first row of the symbol in the SDRAM.

Row\_SDRAM <= RAM\_DATA\_o&'0';

Col\_SDRAM <= 16\***row**;

Length of the burst is 16 words (each 16 bits)

* If **row**=16…31 then we will use the second row of the symbol in the SDRAM.

Row\_SDRAM <= RAM\_DATA\_o&'1';

Col\_SDRAM <= 16\*(**row**-16);

Length of the burst is 16 words (each 16 bits)