Cómo importar-exportar los pines en Quartus

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Entrada: https://soceame.wordpress.com/2025/01/14/como-importar-exportar-los-pines-en-quartus/

Blog: https://soceame.wordpress.com/

GitHub: https://github.com/DRubioG

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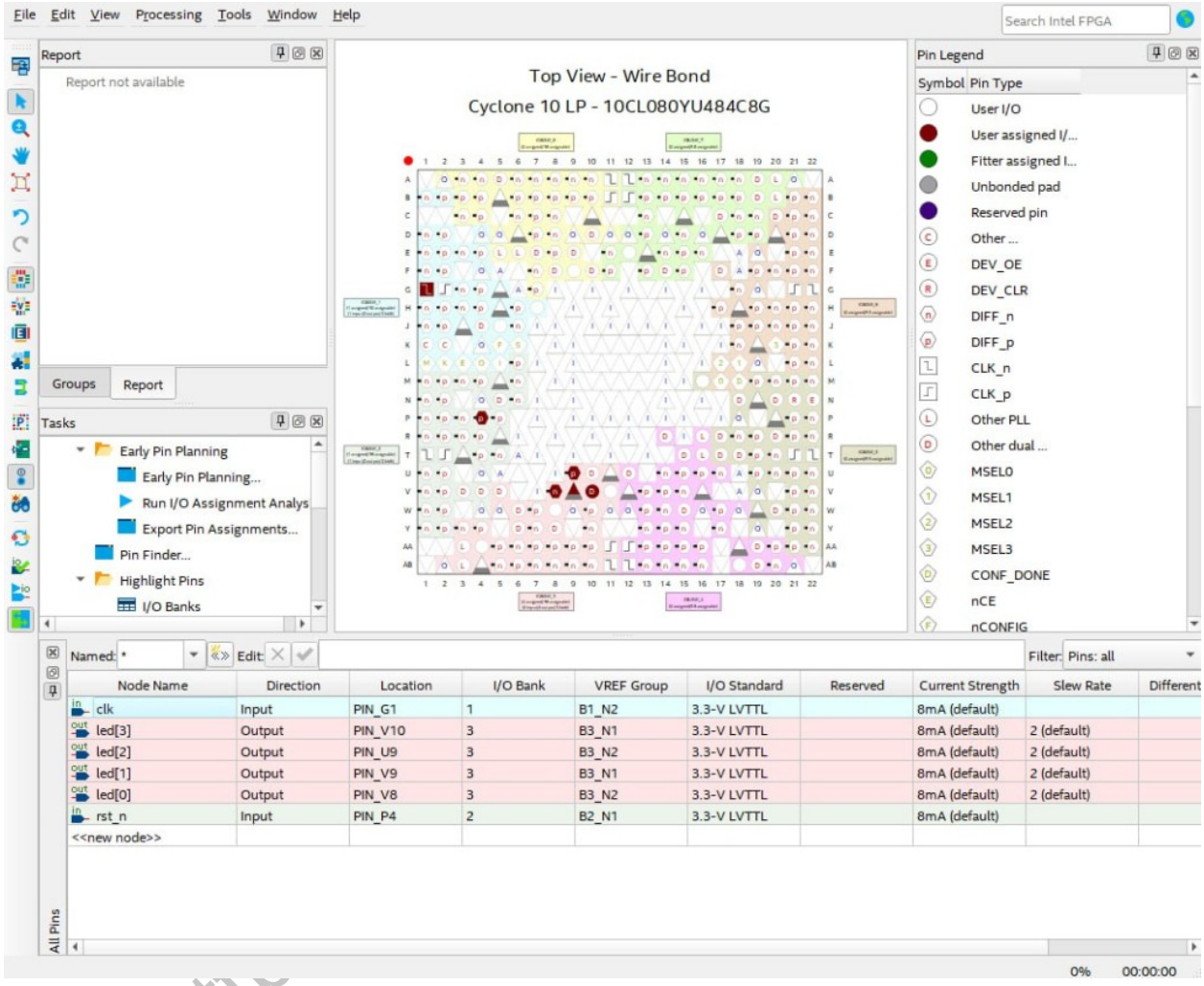
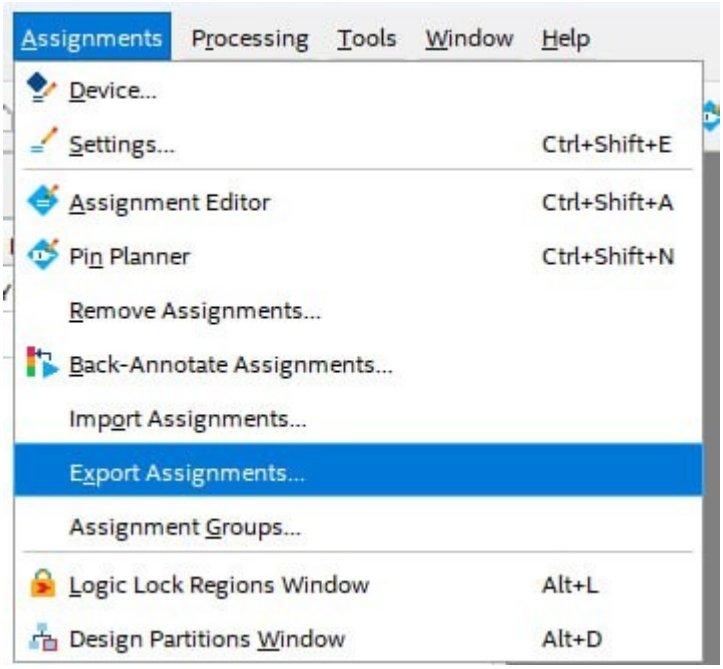
Exportar fichero de pines

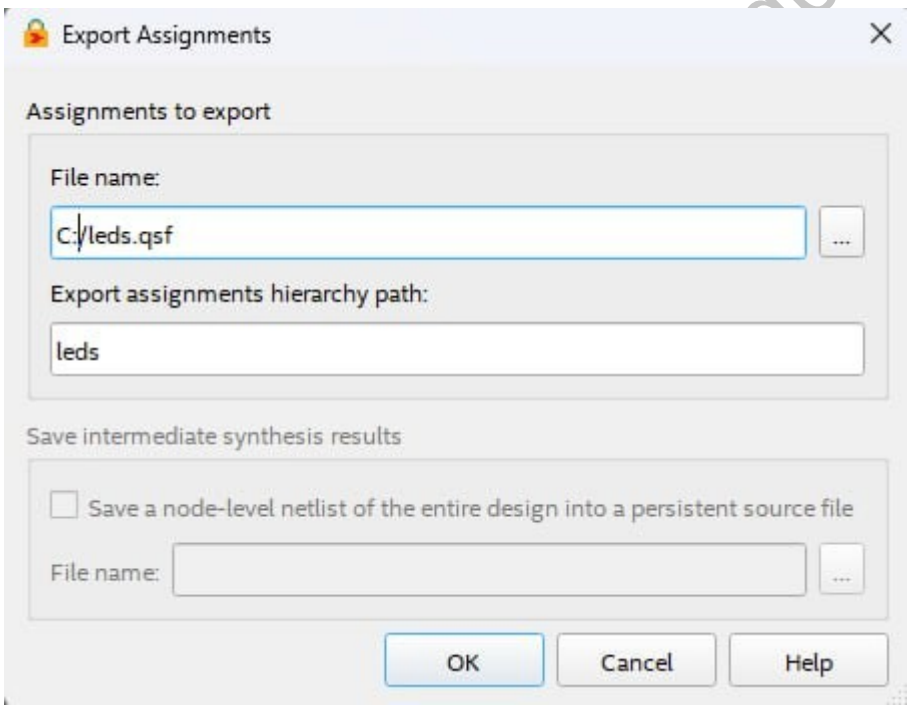
Lo primero que tienes que tener para poder exportar un fichero de pines es la configuración de los pines de la FPGA.



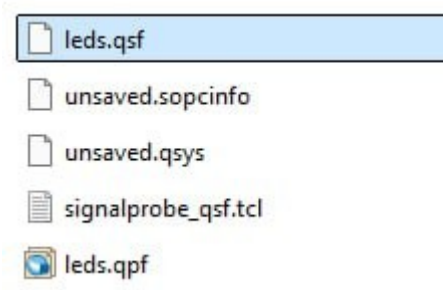
Una vez la tengas, vuelves a Quartus y en *Assigments* tienes la opción de *Export Assigments…*



Luego te pide un nombre para el archivo QSF.



Cuando terminas tendrás un nuevo fichero .qsf.

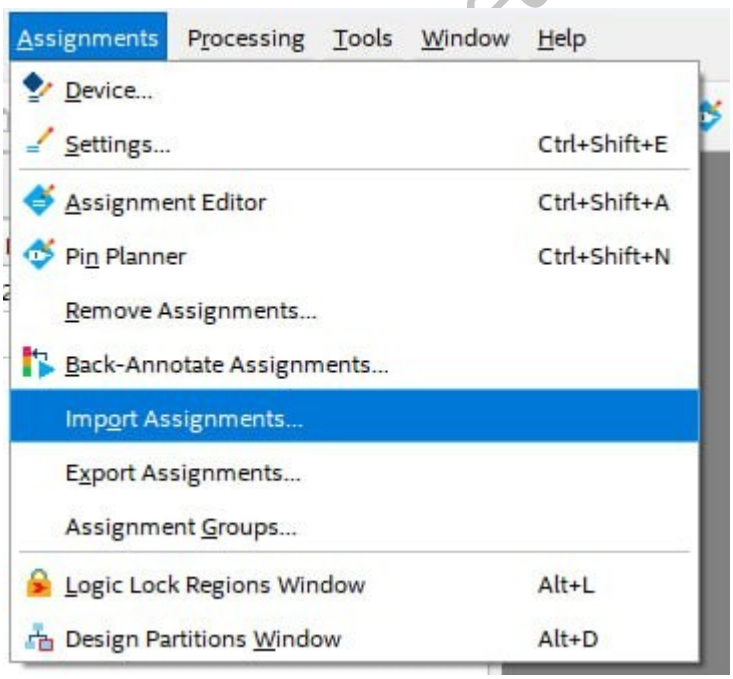


Ahora si miramos el fichero QSF aparecen los pines utilizados.

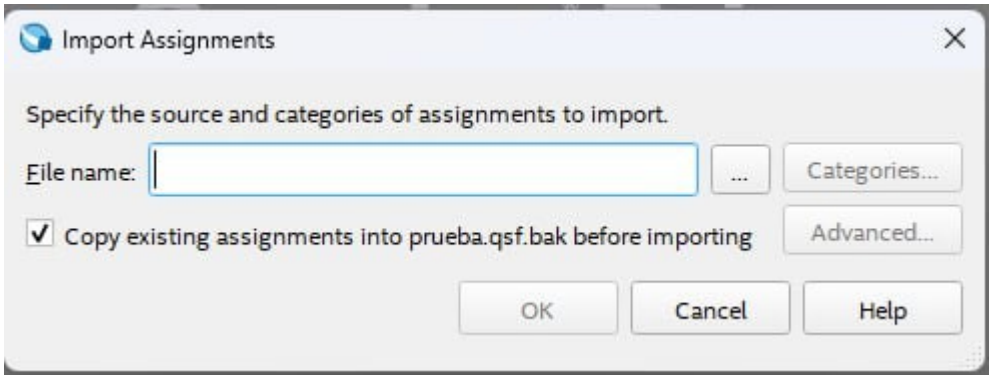
```
set_global_assignment -name PARTITION_NETLIST_TYPE POST_FIT -section_id Top
set_global_assignment -name PARTITION_FITTER_PRESERVATION_LEVEL PLACEMENT_AND_ROUTING -section_id Top
set_global_assignment -name PARTITION_COLOR 16764057 -section_id Top
set_location_assignment PIN_G1 -to clk
set_location_assignment PIN_V10 -to led[3]
set_location_assignment PIN_U9 -to led[2]
set_location_assignment PIN_V9 -to led[1]
set_location_assignment PIN_V8 -to led[0]
set_location_assignment PIN_P4 -to rst_n
set_instance_assignment -name IO_STANDARD "3.3-V LVTTL" -to clk
set_instance_assignment -name IO_STANDARD "3.3-V LVTTL" -to led[3]
set_instance_assignment -name IO_STANDARD "3.3-V LVTTL" -to led[2]
set_instance_assignment -name IO_STANDARD "3.3-V LVTTL" -to led[1]
set_instance_assignment -name IO_STANDARD "3.3-V LVTTL" -to led[0]
set_instance_assignment -name IO_STANDARD "3.3-V LVTTL" -to led
set_instance_assignment -name IO_STANDARD "3.3-V LVTTL" -to rst_n
```

Importar fichero de pines

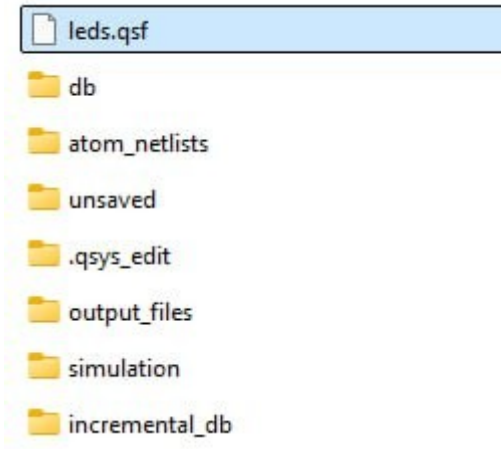
Para importar un fichero de pines en Quartus, vamos a *Assigments* y después a *Import Assigments*.



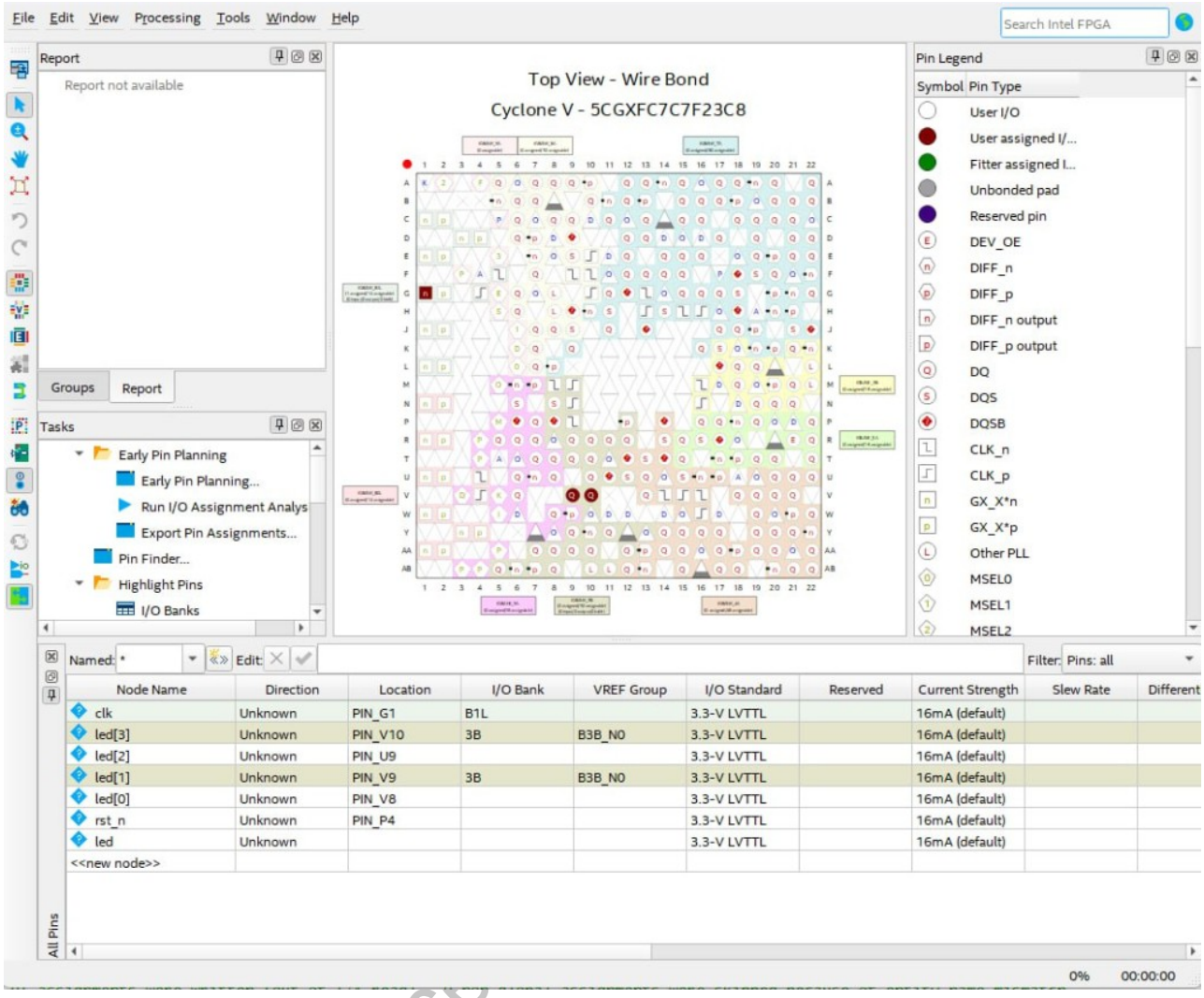
Nos pregunta por el fichero de pines.



Le entregamos un .qsf



Y al terminar si entramos en el *Pin Planner* podemos ver como los pines se han asignado en el proyecto.



NOTA FINAL

Los ficheros QSF incorporan mucha más información como los nodos internos o las configuraciones de depuración.