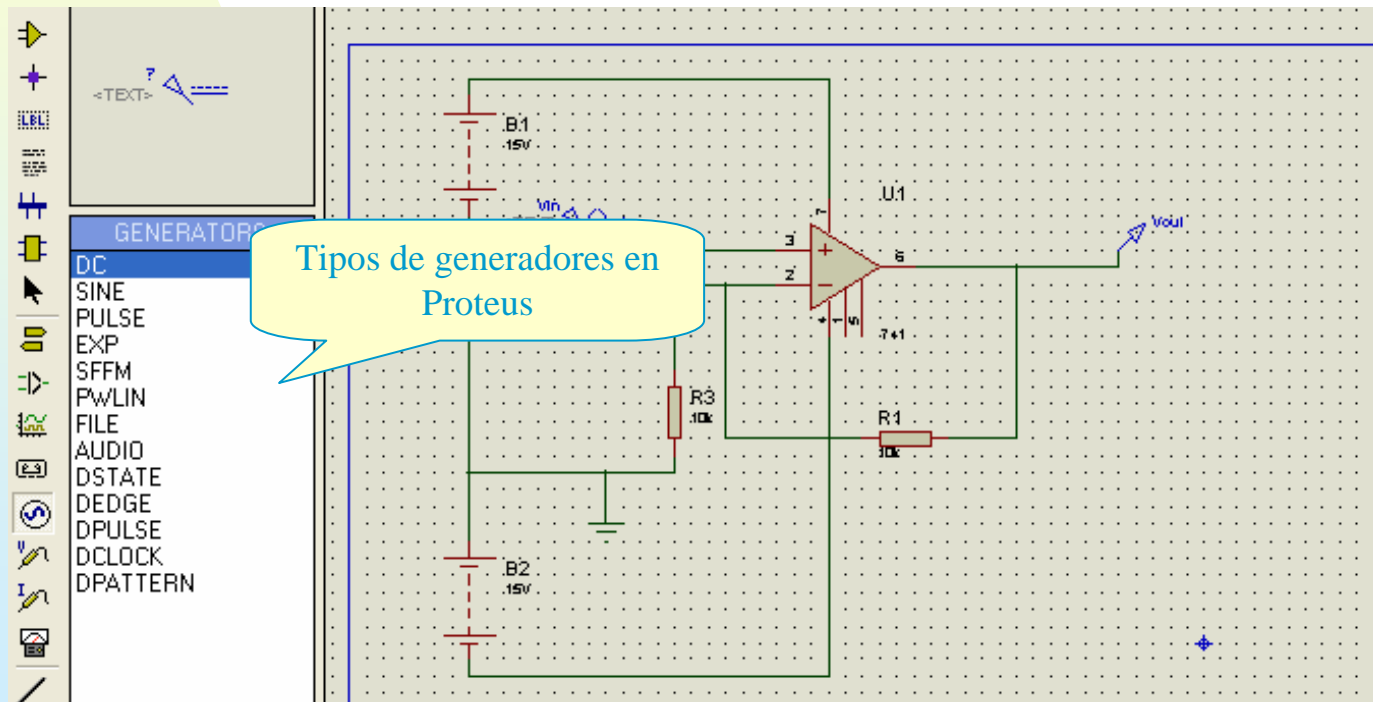




GENERADORES

- Un generador es un objeto que produce señales de distinta naturaleza .
- En **Proteus** existen diferentes tipos de generadores, y cada uno posee sus propias características:



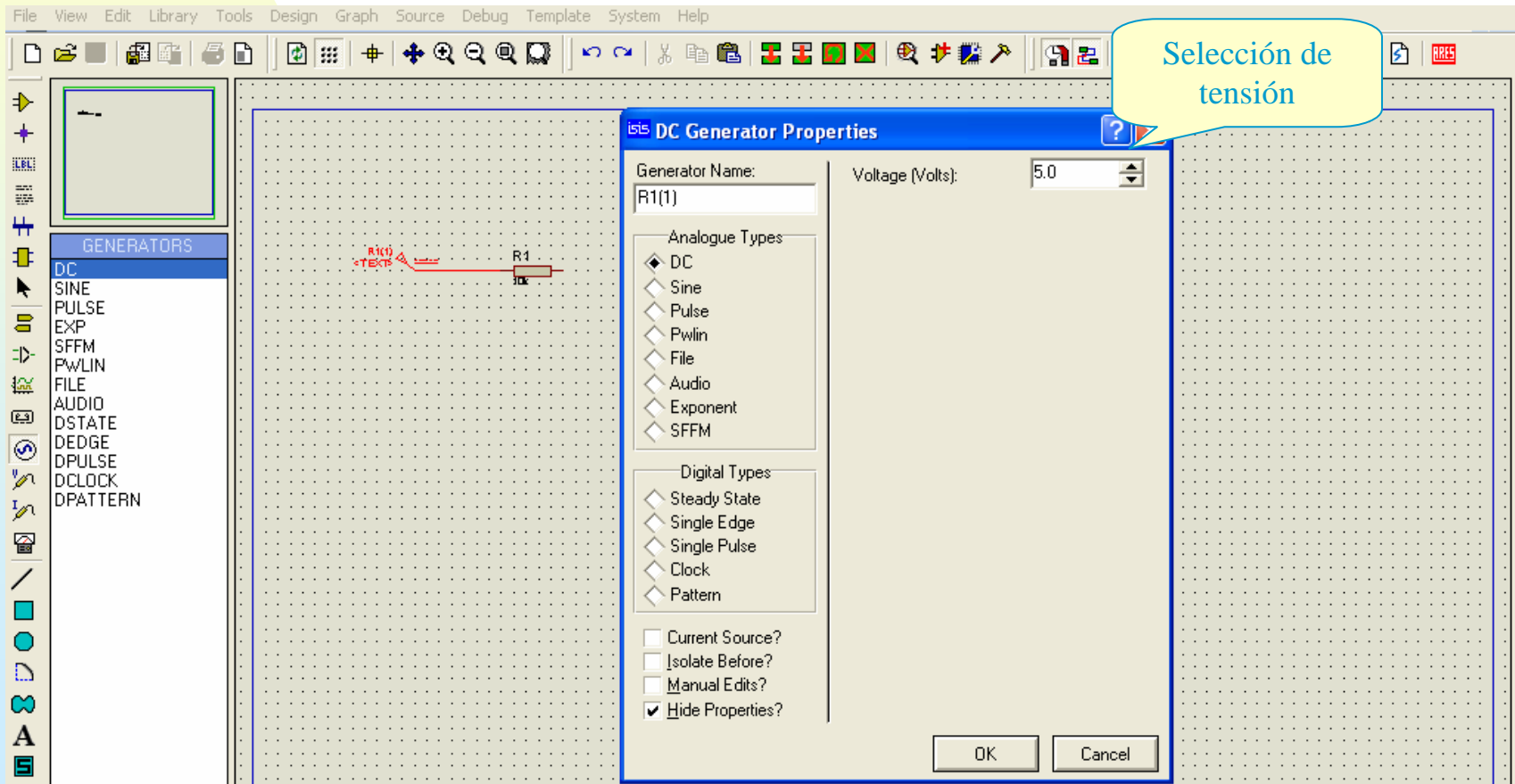
- Los generadores se clasifican en dos grandes grupos:
- **Analógicos:** DC, Sine, Pulse, Pwlin, File, Audio, Exponent, SFFM.
- **Digitales:** Steady State, Single Edge, Single Pulse, Clock, Pattern
- Cada uno de los generadores anteriormente enumerados poseen su propia ventana de edición donde se pueden fijar sus características
- Como en el caso de las sondas, el generador toma por defecto el nombre del nodo o componente donde ha sido conectado

GENERADORES

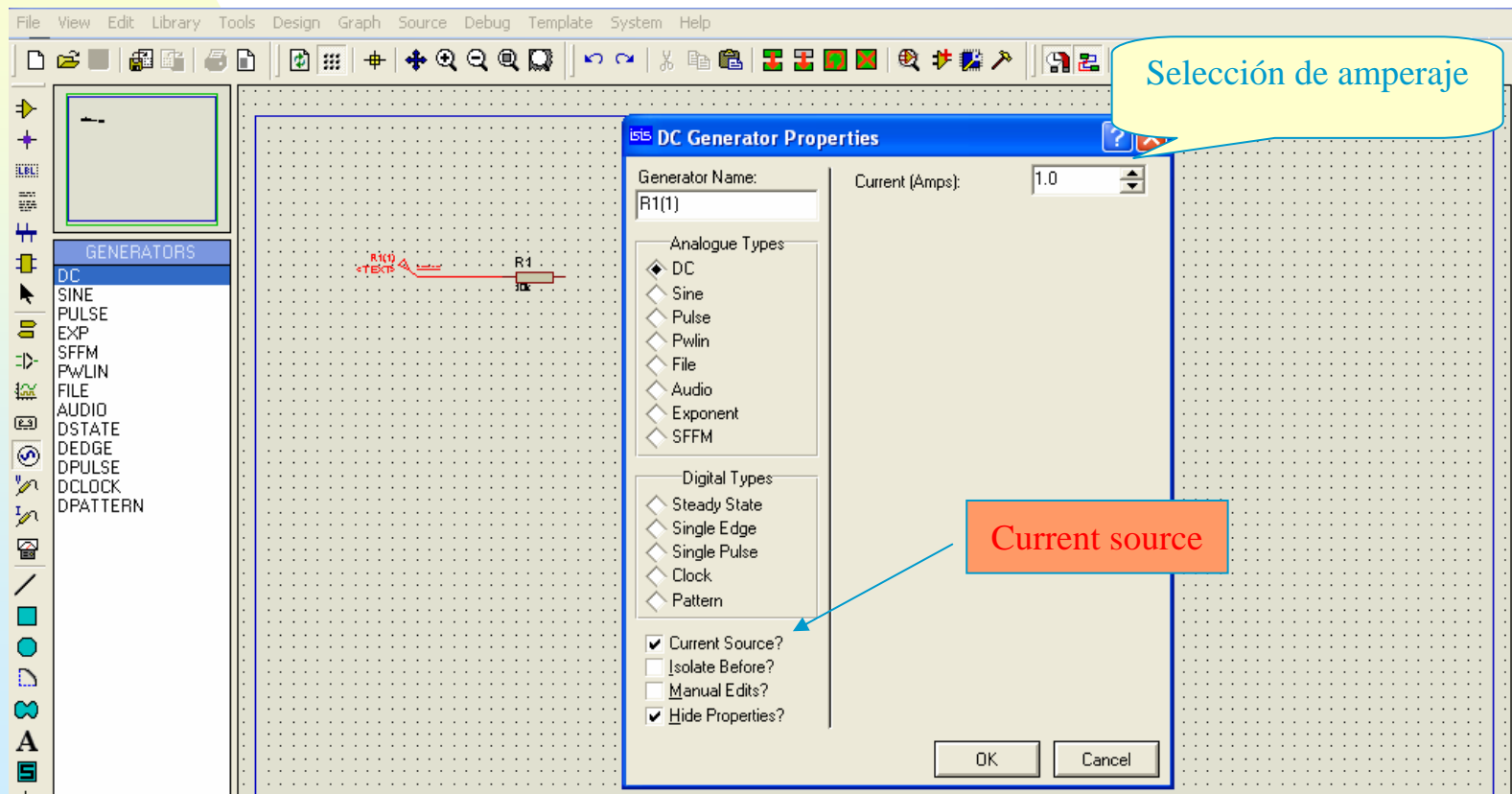
ANALÓGICOS



DC: Fuente de voltaje constante, seleccionando este generador obtendremos el siguiente símbolo y la siguiente ventana de edición:



DC: Fuente de corriente constante, seleccionando este generador y activando la casilla *Current Source* obtendremos el siguiente símbolo y la siguiente ventana de edición:



SINE : Fuente de señal senoidal en la que podemos fijar la amplitud, frecuencia y fase.



UNTITLED - ISIS Professional (Demo)

File View Edit Library Tools Design Graph Source Debug Template System Help

GENERATORS

- DC
- SINE**
- PULSE
- EXP
- SFFM
- PW/LIN
- FILE
- AUDIO
- DSTATE
- DEDGE
- DPULSE
- DCLOCK
- DPATTERN

R1(1)
TEXT

R1

Sine Generator Properties

Generator Name: R1(1)

Offset (Volts): 0.00

Amplitude (Volts)

- Amplitude: 1.0
- Peak:
- RMS:

Timing:

- Frequency (Hz): 1.0
- Period (Secs):
- Cycles/Graph:

Delay:

- Time Delay (Secs):
- Phase (Degrees): 0.0

Damping Factor (1/s): 0.00

Current Source?

Isolate Before?

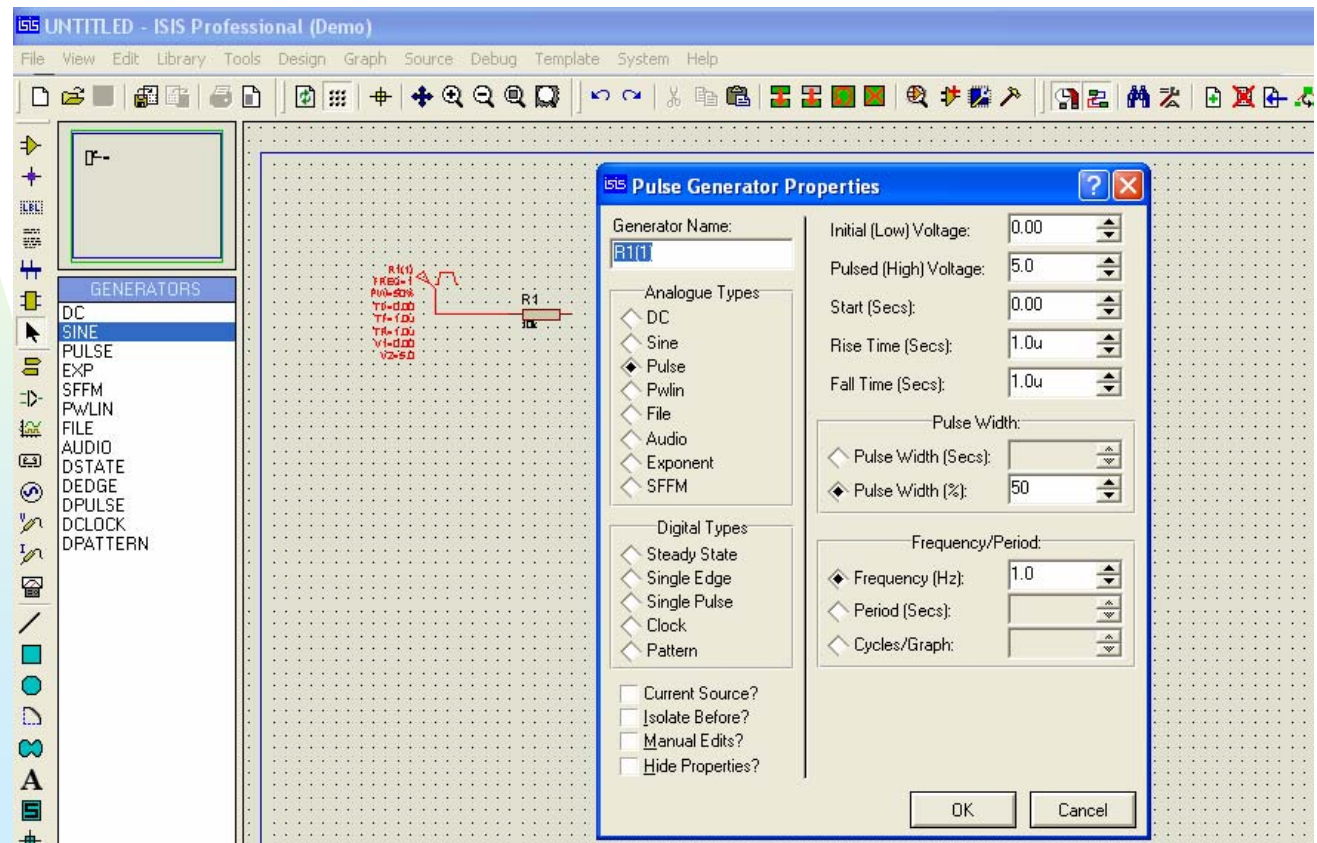
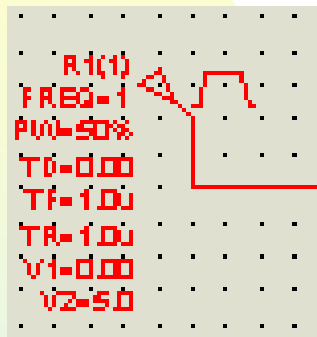
Manual Edits?

Hide Properties?

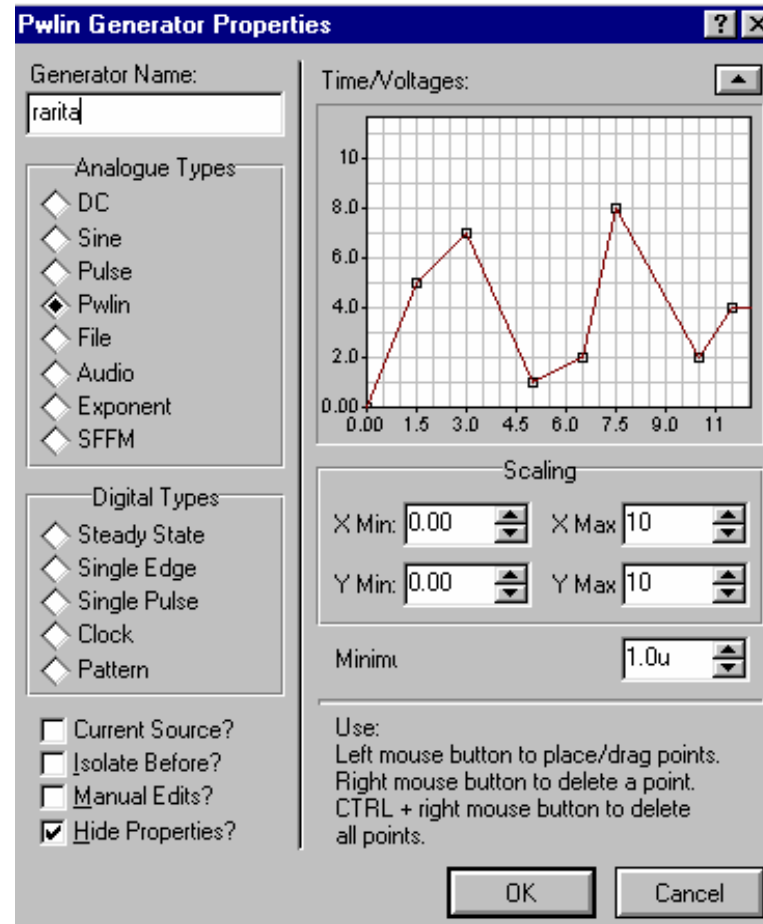
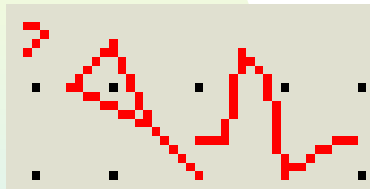
OK Cancel

Activarlo para fuente de corriente

PULSE: Produce pulsos de analógicos, en los cuales se puede fijar la amplitud, periodo, tiempo de subida, tiempo de bajada, ciclo de trabajo etc.



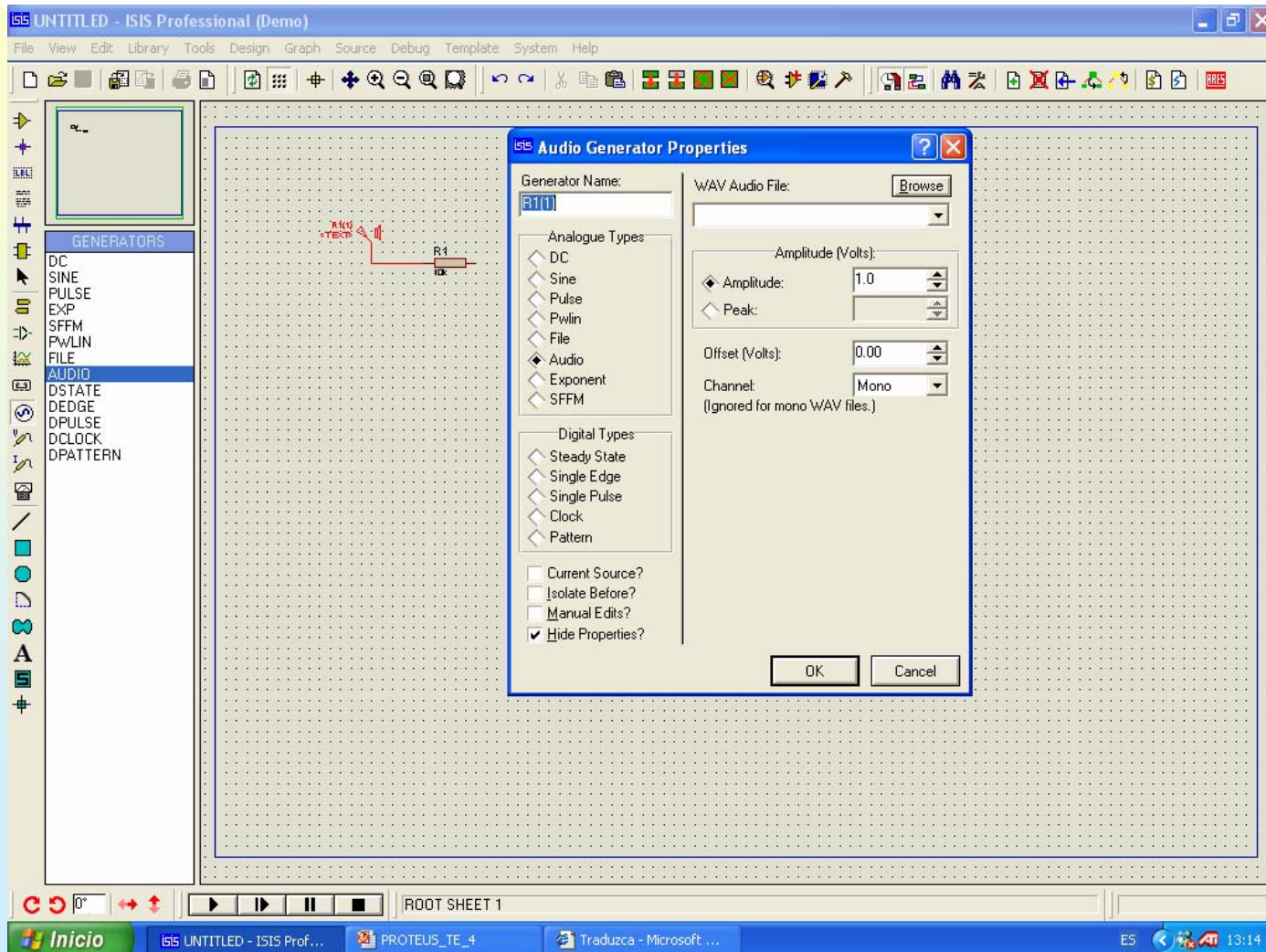
Pwlin: Fuente de señal que permite generar señales de difícil construcción, ej. Señal que hay en la cuadrícula de la ventana de diálogo, se edita sobre la propia ventana.



File: Es similar a la anterior, pero los datos se toman de un fichero ASCII

The screenshot shows the 'File Generator Properties' dialog box in the ISIS Professional software. The 'Generator Name' is set to 'R1(1)'. The 'Data File' field is empty, with a 'Browse...' button next to it. Under the 'Analogue Types' section, the 'File' option is selected. Under the 'Digital Types' section, the 'Steady State' option is selected. At the bottom, the 'Hide Properties?' checkbox is checked. A yellow speech bubble points to the 'Data File' field with the text: 'Aquí deberemos dar el "camino" para encontrar el fichero'.

Audio: Utiliza los archivo de sonido WAV de Windows como entrada.



EXPONENT: Fuente de señal EXPONENCIAL. Produce pulso con diferente RC (constante de tiempo).



UNTITLED - ISIS Professional (Demo)

File View Edit Library Tools Design Graph Source Debug Template System Help

Exponent Generator Properties

Generator Name: R1(1)

Initial (Low) Voltage: 0.00

Pulsed (High) Voltage: 1.0

Rise start time (Secs): 0.00

Rise time constant (Secs): 1.0

Fall start time (Secs): 1.0

Fall time constant (Secs): 1.0

Analogue Types

- DC
- Sine
- Pulse
- Pwlin
- File
- Audio
- Exponent
- SFFM

Digital Types

- Steady State
- Single Edge
- Single Pulse
- Clock
- Pattern

Current Source?

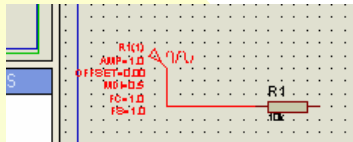
Isolate Before?

Manual Edits?

Hide Properties?

OK Cancel

SFFM: Fuente de señal de frecuencia, genera una señal modulada en frecuencia.



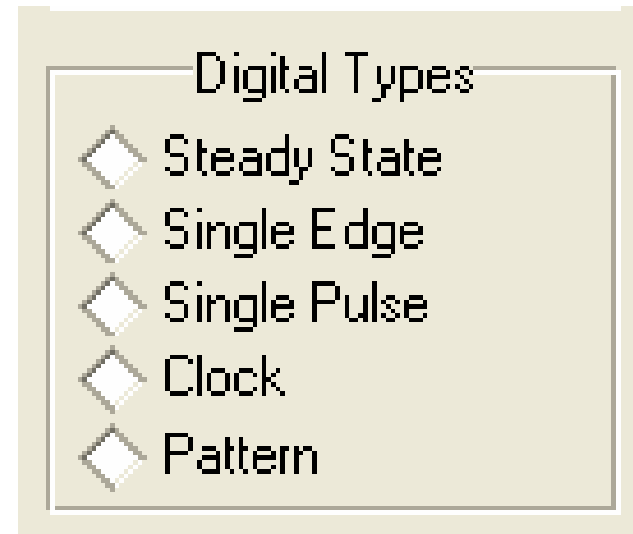
The screenshot shows the ISIS Professional (Demo) software interface. The main window displays a circuit diagram with an SFFM generator and a resistor R1. The SFFM Generator Properties dialog box is open, showing the following settings:

- Generator Name: R1
- Offset (Volts): 0.00
- Amplitude (Volts): 1.0
- Carrier Freq. (Hz): 1.0
- Modulation Index: 0.5
- Signal Freq. (Hz): 1.0

The dialog box also includes sections for Analogue Types and Digital Types, with SFFM selected under Analogue Types. There are also checkboxes for Current Source?, Isolate Before?, Manual Edits?, and Hide Properties? at the bottom of the dialog box. The OK and Cancel buttons are visible at the bottom right of the dialog box.

GENERADORES

DIGITALES



DState: Steady state logic level, fija el pin a un estado lógico (normalmente H o L).

The image shows a circuit board layout with seven resistors labeled R1 through R7. Each resistor is connected to a pin header. The pins are labeled with their initial state and count:

- R1: INIT=HI, COUNT=0
- R2: INIT=HIGH, COUNT=0
- R3: INIT=V0HI, COUNT=0
- R4: INIT=FLOAT, COUNT=0
- R5: INIT=V0LO, COUNT=0
- R6: INIT=LOW, COUNT=0
- R7: INIT=LO, COUNT=0

Overlaid on the right is the "Digital State Generator Properties" dialog box. It has a "Generator Name" field containing "R7(1)". The "State" section has a list of options with radio buttons:

- Power Rail High
- Strong High
- Weak High
- Floating
- Weak Low
- Strong Low
- Power Rail Low

The "Analogue Types" section has a list of options with radio buttons:

- DC
- Sine
- Pulse
- Pwlin
- File
- Audio
- Exponent
- SFFM

The "Digital Types" section has a list of options with radio buttons:

- Steady State
- Single Edge
- Single Pulse
- Clock
- Pattern

At the bottom of the dialog box are four checkboxes:

- Current Source?
- Isolate Before?
- Manual Edits?
- Hide Properties?

Buttons for "OK" and "Cancel" are at the bottom right.

DEdge: Digital Edge, genera una transición de alto a bajo o viceversa.

The image displays the 'Digital Edge Generator Properties' dialog box in a circuit simulation environment. The dialog is titled 'ISIS Digital Edge Generator Properties' and features a blue header bar with a help icon and a close button. The main area is divided into several sections:

- Generator Name:** A text field containing 'R2(1)'.
- Analogue Types:** A list of options with radio buttons: DC, Sine, Pulse, Pwlin, File, Audio, Exponent, and SFFM. None are selected.
- Digital Types:** A list of options with radio buttons: Steady State, Single Edge (selected), Single Pulse, Clock, and Pattern.
- Edge Polarity:** A section with two radio buttons: Positive (Low-To-High) Edge (selected) and Negative (High-To-Low) Edge.
- Edge At (Secs):** A numeric input field set to '500m'.
- Options:** Four unchecked checkboxes: Current Source?, Isolate Before?, Manual Edits?, and Hide Properties?.
- Buttons:** 'OK' and 'Cancel' buttons at the bottom right.

The background shows a circuit diagram on a grid. It includes two resistors, R1 and R2, both labeled '10k'. Two digital edge generators are connected to the circuit. The top generator, R1(1), is labeled with 'INIT=HIGH', 'START=500m', and 'COUNT=1'. The bottom generator, R2(1), is labeled with 'INIT=LOW', 'START=500m', and 'COUNT=1'. The circuit is connected to a ground symbol.

Dpulse: Digital Pulse, genera un pulso LHL ó HLH y en el cual podemos fijar su duración.

The screenshot displays a circuit simulation environment. On the left, a 'GENERATORS' panel lists various signal sources, with 'DPULSE' highlighted. The central workspace shows two digital pulse generator symbols, R1(1) and R2(1), connected to resistors R1 and R2. R1(1) is configured with parameters: INIT=LOW, START=0, COUNT=2, WIDTH=0.5. R2(1) is configured with parameters: INIT=HIGH, START=0, COUNT=2, WIDTH=4. The 'Digital Pulse Generator Properties' dialog box is open, showing the following settings:

- Generator Name: R2(1)
- Analogue Types: DC, Sine, Pulse, Pwlin, File, Audio, Exponent, SFFM
- Digital Types: Steady State, Single Edge, **Single Pulse**, Clock, Pattern
- Current Source?:
- Isolate Before?:
- Manual Edits?:
- Hide Properties?:
- Pulse Polarity: Positive (Low-High-Low) Pulse, Negative (High-Low-High) Pulse
- Pulse Timing: Start Time (Secs): 0.00, **Pulse Width (Secs): 4.0**, Stop Time (Secs):

Buttons for 'OK' and 'Cancel' are visible at the bottom of the dialog box.

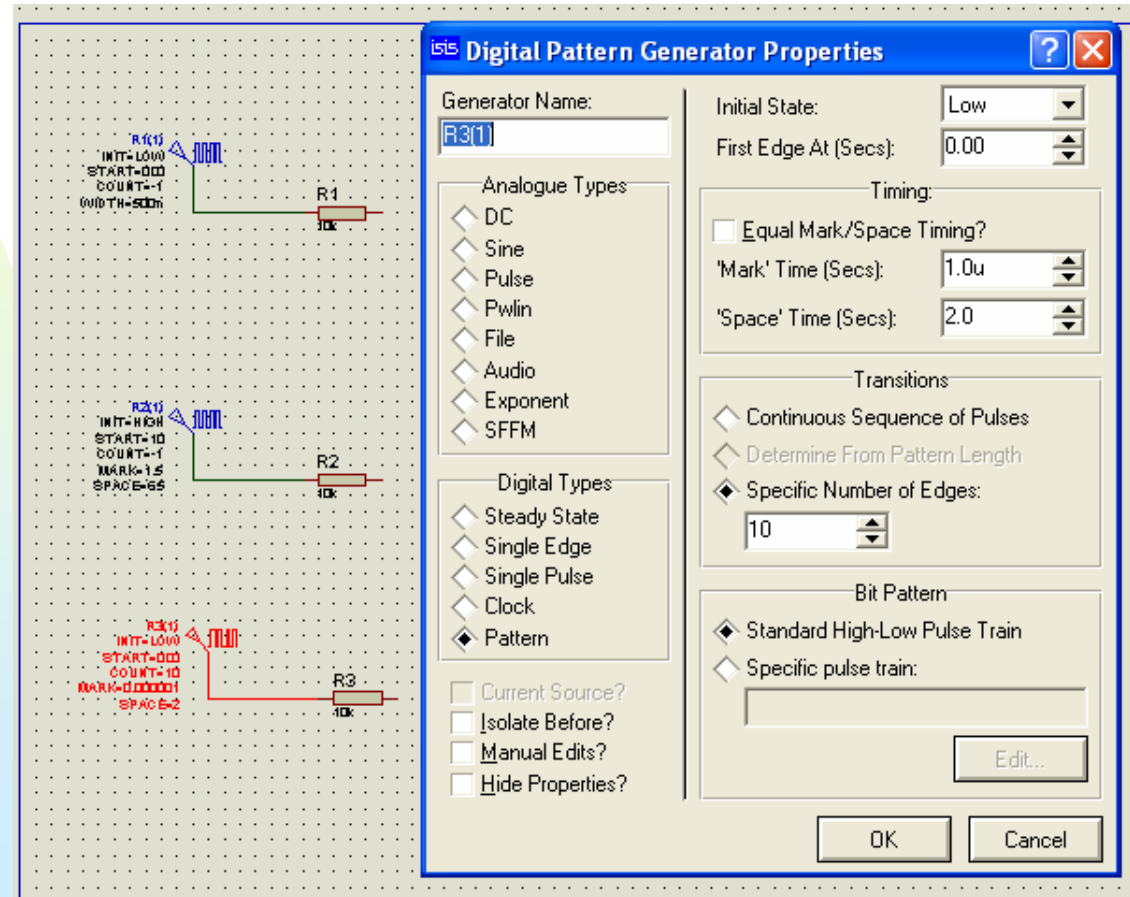
DClock: Digital Clock, genera un tren de pulsos en los cuales podemos fijar la frecuencia así como el estado inicial.

The image shows a screenshot of a circuit simulation software interface. On the left, there is a vertical toolbar with various icons, and a panel titled "GENERATORS" listing different signal sources: DC, SINE, PULSE, EXP, SFFM, PWLIN, FILE, AUDIO, DSTATE, DEDGE, DPULSE, **DCLOCK** (highlighted), and DPATTERN. The main workspace displays a circuit diagram on a grid. Two resistors, R1 and R2, are connected to digital clock generators. R1C1 is labeled with parameters: INIT=LOW, START=00, COUNT=1, WIDTH=0.0005. R2C1 is labeled with parameters: INIT=HIGH, START=00, COUNT=1, WIDTH=5e-105. The "Digital Clock Generator Properties" dialog box is open, showing the following settings:

- Generator Name: R21
- Clock Type: High-Low-High Clock
- Timing: First Edge At: 0.00, Frequency (Hz): 100k
- Digital Types: Clock
- Options: Current Source?, Isolate Before?, Manual Edits?, Hide Properties?

Buttons for "OK" and "Cancel" are visible at the bottom of the dialog box.

DPattern: Mediante este generador podemos generar una secuencia de niveles lógicos con comportamientos especiales



DPattern: También es posible editar la señal con el ratón para activar esta opción se debe seleccionar *Specific pulse train* y luego hacer clic sobre *Edit* :

