Memory Initialization File (.mif)

An ASCII text file (with the extension **.mif**) that specifies the initial content of a memory block (RAM or ROM).

An MIF is used as an input file for memory initialization in the Compiler and Simulator. (You can also use a Hexadecimal File (**.hex**) to provide memory initialization data.) An MIF contains the initial values for each address in the memory. A separate file is required for each memory block. In an MIF, you are also required to specify the memory depth and width values. In addition, you can specify the radixes used to display and interpret addresses and data values. Following is a sample MIF:

```
DEPTH = 32;              % Memory depth and width are required    %
WIDTH = 14;              % Enter a decimal number                 %

ADDRESS_RADIX = HEX;     % Address and value radixes are optional  %
DATA_RADIX = HEX;        % Enter BIN, DEC, HEX, or OCT; unless     %
                         % otherwise specified, radixes = HEX      %

-- Specify values for addresses, which can be single address or range

CONTENT
  BEGIN
     [0..F] : 3FFF;    % Range--Every address from 0 to F = 3FFF %
     6       : F;       % Single address--Address 6 = F          %
     8       : F E 5;   % Range starting from specific address--  %
  END ;                 % Addr[8] = F, Addr[9] = E, Addr[A] = 5   %
```

☞   If multiple values are specified for the same address, only the last value is used.

You can create an MIF in the MAX+PLUS II Text Editor or any ASCII text editor. You can also very easily generate an MIF by exporting data from the Simulator's **Initialize Memory** dialog box; this method is especially useful when you need to initialize a small memory block. In addition, Memory Initialization Output Files (**.mio**), which are generated when you create a Text Design Output File (**.tdo**), can be renamed and used as MIFs.

The file icon for an MIF with the same filename as the top-level design file in the current hierarchy tree appears in the Hierarchy Display window.

See also:
   Creating AHDL Text Design Output Files
   Initializing RAM/ROM Memory