



FIGURE 29.1 Propagation Delay per Gate Versus Power Dissipation for Various Logic Families with Constant Power-Delay Product Lines Indicated

The interconnection of different logic family circuits requires compatibility of the voltage and current levels between the two circuits. Furthermore, the various logic families in general have very different logic levels. Hence, a direct connection of the output of one family to the input of another family is often not possible. Then, an interface circuit or translator circuit is placed in between the two chips. Many in-

terface circuits are available in chip form. Basically, an interface circuit performs a level shifting of the driving device output current and driven voltage to make these compatible with the input of the driven circuit.

In this section, we consider various examples of interfacing. The interface circuits used are not unique, as we shall see.