

and then

$$M[I][J]$$

denotes the component J (of type T) of component I of M .

For multidimensional arrays, it is customary to make these convenient abbreviations:

$$\text{var } M: \text{array } [A..B, C..D] \text{ of } T;$$

and

$$M[I, J]$$

We may regard M as a matrix and say that $M[I, J]$ is component J (in column J) of component I of M (of row I of M).

Arrays are not limited to two dimensions, for T can again be a structured type. In general, the (abbreviated) form is:

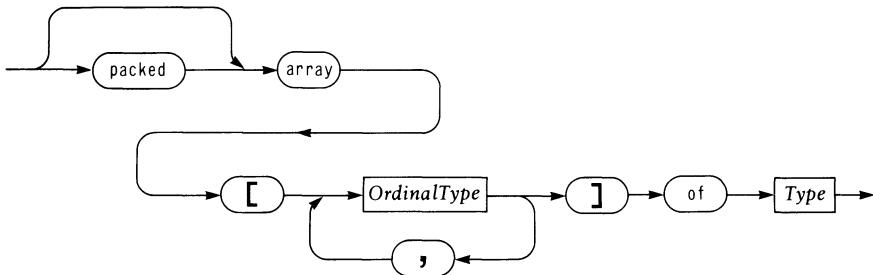


Figure 6.d Syntax diagram for *ArrayType*

If n index types are specified, the array is said to be n -dimensional, and a component is denoted by n index expressions.

If A and B are array variables of the same type, then the assignment statement

$$A := B$$

is allowed if the arrays are component-wise assignable:

$$A[i] := B[i]$$

(for each i that is a value of the index type), and is an abbreviation for the assignment of each corresponding component.