## 27.2 The With statement

The with statement is used to associate attributes to TTCN‑3 language elements (and sets thereof).

***Syntactical Structure***

**with** "{"

{ ( **encode** | **variant** | **display** | **extension** | **optional** )

 [ **override** | **@local** ]

 ["(" *DefinitionRef* | *FieldReference* | *AllRef* ")"]

 [ ( *FreeText* | ("{" *FreeText* { "," *FreeText* } "}") ) "." ] *FreeText* [";"] }

"}"

***Semantic Description***

There are five kinds of attributes that can be associated to language elements:

a) **display:** allows the specification of display attributes related to specific presentation formats;

b) **encode:** allows references to specific encoding rules;

c) **variant:** allows references to specific encoding variants;

d) **extension:** allows the specification of user-defined attributes;

e) **optional:** allows the implicit setting of optional fields in records and sets to omit.

The syntax for the argument of the **with** statement (i.e. the actual attributes) is defined as a free text string.

*DefinitionRef* and *FieldReference* identify a definition or field respectively which is within the module, group or definition to which the **with** statement is associated.

*AllRef* can be used to apply attributes to multiple language elements defined within the scope to which the **with** statement is associated. *AllRef* provides a flexible mechanism to select all language elements or all language elements of a certain kind defined in a given scope. Individual language elements that are not affected by an attribute can be excluded from a set of selected language elements in the **except** clause.

***Restrictions***

In addition to the general static rules of TTCN‑3 given in clause 5, the following restrictions apply:

a) *DefinitionRef* and *FieldReference* shall refer to a definition or field respectively which is within the module, group or definition to which the with statement is associated.

b) In case multiple attributes of the same type are allowed, all of them shall be without an additional modifier (**override**, **@local**) or the modifier shall be the same for all attributes.

c) Dot notation in the *FreeText* part is allowed for variant attributes only.

EXAMPLE:

 **type** **record** MyService {

 **integer** i,

 **float** f

 }

 **with** { **display** "ServiceCall" } // MyRecord will be displayed as a ServiceCall

 **group** G {

 ...

 } **with** { **encode**(**template** **all** **except** {mw\_msg1}) "Rule1" }

 // with the exception of mw\_msg1, all templates defined in this group will be encoded

 // using the "Rule1" encoding