

Brief style for selection

GNU68-2026-001-brief-selection (draft)

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Foreword

The following specification has been released under the auspices of the GNU Algol 68 Working Group, and has been scrutinized to ensure that

- a. it is strictly upwards-compatible with Algol 68,
- b. it is consistent with the philosophy and orthogonal framework of the language, and
- c. it fills a clearly discernible gap in the expressive power of that language.

The source of this document can be found at <https://git.sr.ht/~jemarch/gnu68>.

The informal description of this proposal introduces the proposed new language features, providing a rationale and usage examples.

The formal definition of this proposal uses the existing formalism and conventions of the Revised Report, and it is expressed as modifications to the Report.

Finally, the implementation notes of this proposal describes a way in which the features added by this specification can be implemented. No implementer should feel committed to do things as described there; the same language facilities may well be implementable in other ways, more suitable to specific implementations.

1 Informal Description

It was early recognized that a shorter alternative representation the of-symbol was very much needed, considering the fact the bold version **of** is at least four characters long. This makes certain phrases long and also slightly laborious to read, like in:

```
pub op + = (Pos a,b) Pos: (c of a + c of b, r of a + r of b),
      - = (Pos a,b) Pos: (c of a - c of b, r of a - r of b);
```

In his “ALGOL 68 Hardware Representation Recommendations” [AB42.4.2] Wilfred J. Hansen describes different proposals for shorter alternative representations of the of-symbol which came out during the preparation of the Standard Hardware Representation.

Of these, the preferred one was to use the apostrophe character `'`, because:

- Apostrophe is a worthy character.
- It is unused out of string and character denotations.
- It is just one character long.

The proposal was not carried on in the Standard Hardware Representation because it is fundamentally not compatible with the QUOTE stropping regime, which was widely used back then. It is unlikely implementations of GNU Algol 68 will support QUOTE stropping however.

Using the brief form of selection, the example above now becomes:

```
pub op + = (Pos a,b) Pos: (c'a + c'b, r'a + r'b),
      - = (Pos a,b) Pos: (c'a - c'b, r'a - r'b);
```

2 Formal Description

Selection now exists in two styles: bold and brief.

5.3 Units associated with stowed values

5.3.1 Selections

5.3.1.1 Syntax

a) REFETY MODE1 NEST selection{5C} :

MODE1 field FIELDS applied field selector with TAG{48d},
 STYLE selection token, weak REFLEXETY ROWS of structured with
 FIELDS mode NEST SECONDARY{5C},
 where (REFETY) is derived from (REFLEXETY){b,c,-}.

Two new symbols have been invented, along with a proposed representation in the reference language. The of symbol is now unused.

9.4.1.f

bold of symbol{53a}	of
brief of symbol{53a}	,

3 Implementation Notes

The addition of the brief form of selection to existing implementations should be pretty straightforward.

It makes sense to support this brief form in both UPPER and SUPPER stropping. The extension shall be disabled in QUOTE stropping for obvious reasons.