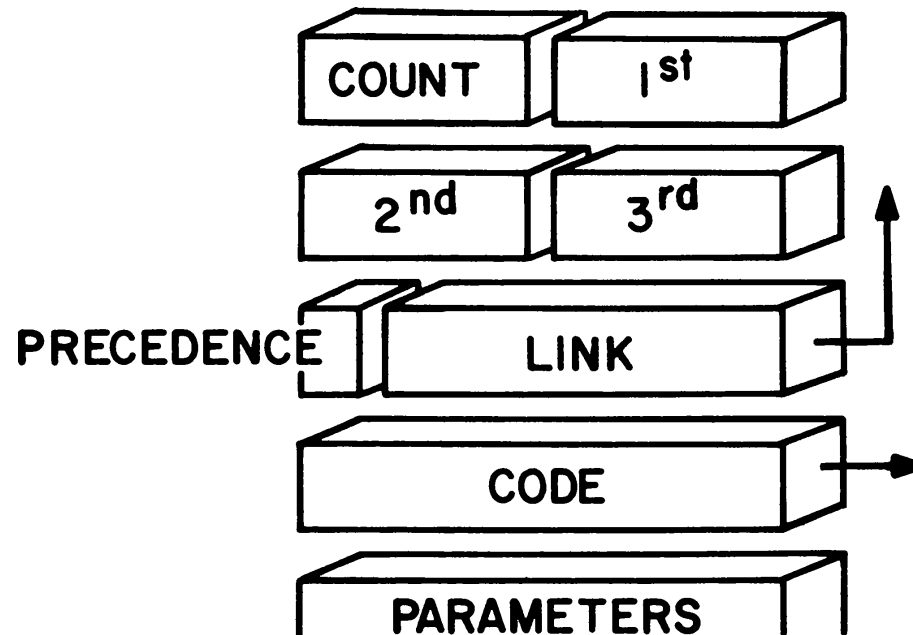


Der neue Gforth-Header

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Der ursprüngliche Forth-Header



Charles H. Moore. Forth: A new way to program a mini-computer.
Astron. Astrophys. Suppl., 15:497–511, 1974.

Weitere Anforderungen \Rightarrow Alter Gforth-Header

- Lange Namen
- `alias` \Rightarrow `alias-Bit`
- `compile-only` \Rightarrow `restrict-Bit`
- `interpret/compile:` \Rightarrow spezielles Code Field

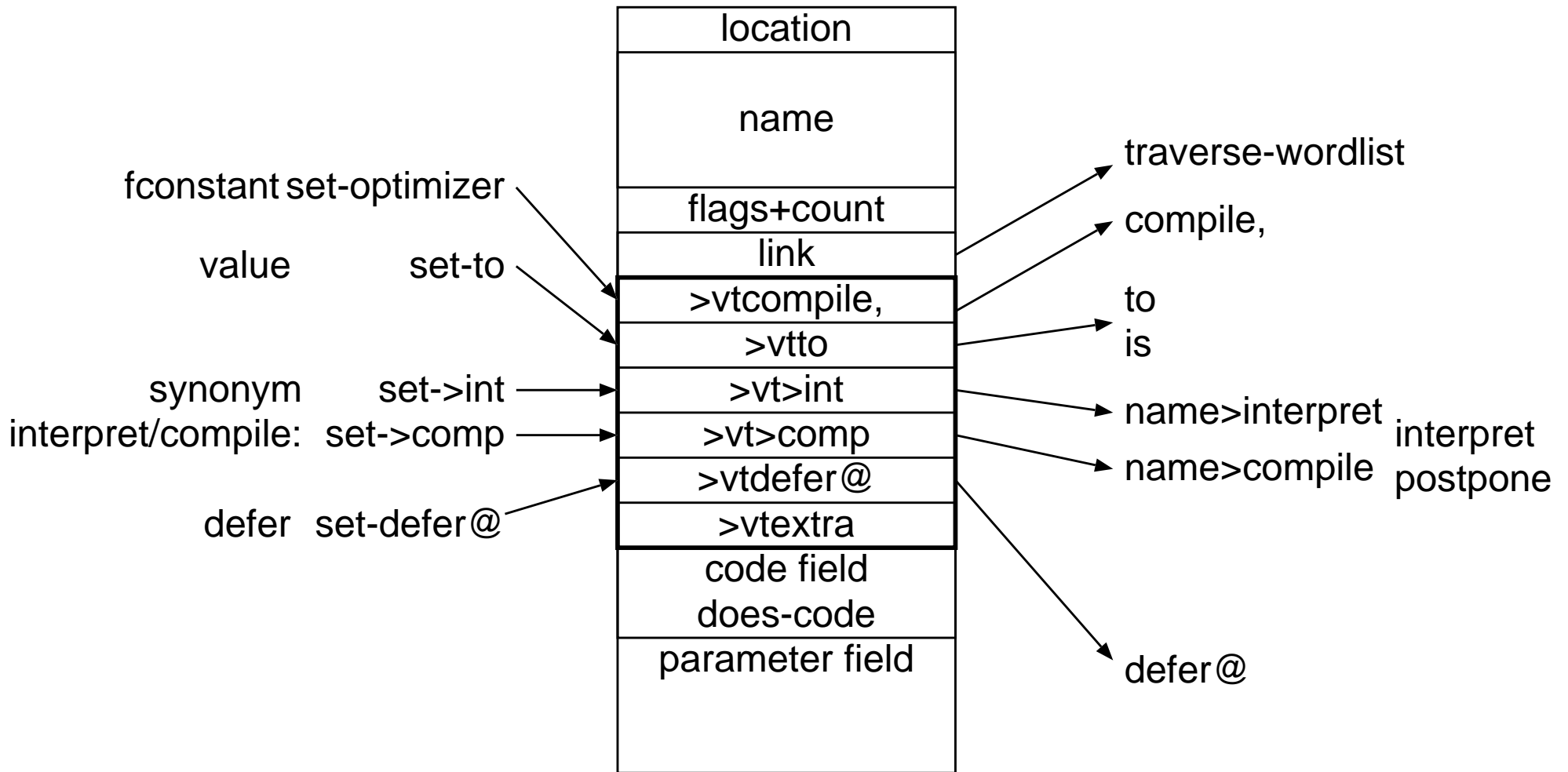
\Rightarrow viele ifs

Noch mehr Anforderungen

- Dual-semantics (`s''`)
- `locate`
- `synonym`
- `to` für `value fvalue 2value locals`
- Varianten von `defer` (z.B. `udefer`)
- `intelligent compile`,

⇒ neuer Header

Der neue Header (vereinfacht)



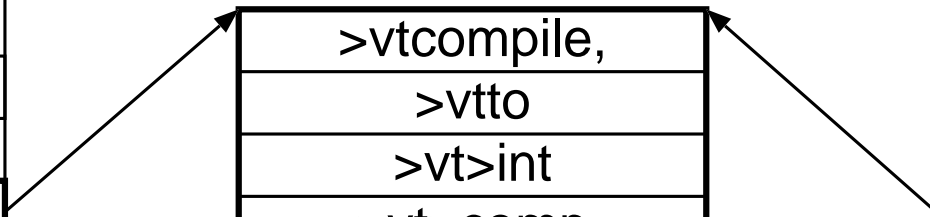
Deduplikation

5 value foo
6 value bar

location
foo
flags+count
link
code field does-code
5

>vtcompile,
>vtto
>vt>int
>vt>comp
>vtdefer@
>vtextra

location
bar
flags+count
link
code field does-code
6

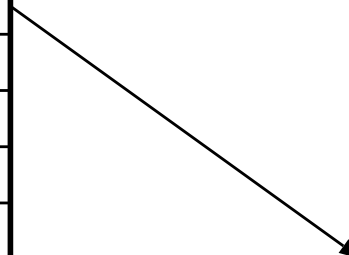


TO

```
5e fvalue foo
6e to foo
: bar 7e to foo ;
```

location
foo
flags+count
link
>vtcompile,
>vtto
>vt>int
>vt>comp
>vtdefer@
>vtextra
code field
does-code
parameter field

location
fvalue-to
flags+count
link
>vtcompile,
code field
does-code
parameter field



Code (vereinfacht)

```
: fconstant ( r "name" -- )
  create f,
  ['] f@ set-does>
  [: >body f@ POSTPONE fliteral ;] set-optimizer ;

to: fvalue-to ( r xt -- )
  >body f! ;

to-opt: ( xt -- ) >body POSTPONE literal POSTPONE f! ;

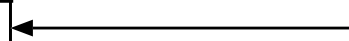
: fvalue ( r "name" -- )
  fconstant
  [: >body POSTPONE literal POSTPONE f@ ;] set-optimizer
  ['] fvalue-to set-to ;
```


Synonym

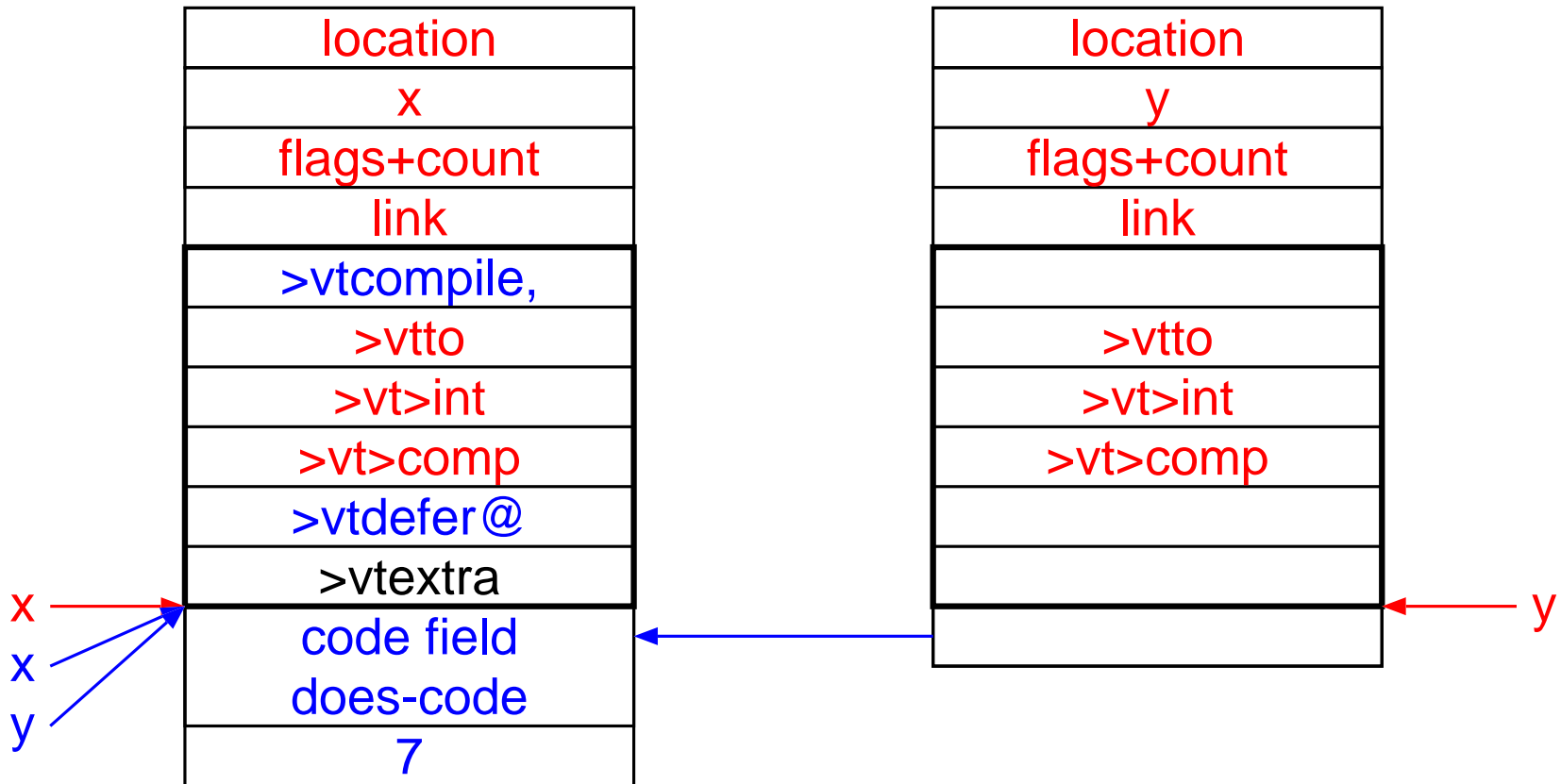
6 value x
synonym y x
7 to y
x . \ prints 7

location
x
flags+count
link
>vtcompile,
>vtto
>vt>int
>vt>comp
>vtdefer@
>vtextra
code field does-code
7

location
y
flags+count
link
>vtto
>vt>int
>vt>comp



NT, XT, Universal Token?



Zusammenfassung

- Prototyp-basierter objektorientierter Ansatz
- Methoden statt If-Kaskaden
- Methoden in vt ausgelagert, Deduplikation
- nt=xt, soweit möglich