PLN CDR draft: Issue 8

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1 Issue 8 (Interaction with FORMAT)

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1.1 Description

It is not clear how *local nicknames* should affect the tilde slash `\~//` directive of `format`.

1.2 Notes

- If `\~//` directive wasn't affected by *local nicknames*, it would mean that using [long and not-so-easy-to-use] package names is necessary.

- It would be counterintuitive if the function used by the `\~//` directive could change based on the *current package* at **execution time** (that is, if the symbol lookup was affected by *local nicknames* of the *current package*).

  This could also break existing code if a *local nickname* in the *current package* shadows the name of a package containing a function used in a format control string in the called function. The only way to prevent this issue would be to rebind the `*package*` variable around any call to `format` where the `\~//` directive is used.

- Finally, if the call to `format` is not compiled, it would be hard to impossible to find the function using *local nicknames* of the package that was the *current package* at **compile time**.

1.3 Examples

```
(defpackage #:foo-a (:use) (:export #:ff))
(defpackage #:foo-b (:use) (:export #:ff))

(defun foo-a:ff (stream &rest args)
  (declare (ignore args))
  (format stream "FOO-A:FF"))

(defun foo-b:ff (stream &rest args)
  (declare (ignore args))
  (format stream "FOO-B:FF"))

(defpackage #:bar-a
  (:use #:cl)
```

```
   (:local-nicknames (#:nick #:foo-a)))

(defpackage #:bar-b
  (:use #:cl)
  (:local-nicknames (#:nick #:foo-b)))

(in-package #:bar-a)

(defun test ()
  (format t "Called ~/nick:ff/ & " nil)
  (let ((*package* (find-package (quote #:bar-a))))  ; or #.*package*
    (format t "~/nick:ff/~%" nil)))

(test)
; => "Called FOO-A:FF & FOO-A:FF"  (sbcl, ccl, ecl, acl, abcl, clasp)
; lispworks errors (NICK package not found)
(let ((*package* (find-package (quote #:bar-b))))
  (test))
; => "Called FOO-A:FF & FOO-A:FF"  (sbcl, clasp)
; => "Called FOO-B:FF & FOO-A:FF"  (ccl, ecl, acl, abcl)
; lispworks errors (NICK package not found)
```

1.4 Proposal NOT-AFFECTED-BY-LOCAL-NICKNAMES

The tilde slash \~// directive of `format` must **not** use *local nicknames* of any package when looking up the specified symbol.

1.4.1 Rationale

When the package prefix is not specified, the specified symbol is not looked up in the *current package*, but instead in the `#:CL-USER` package. That suggests that the tilde slash \~// directive should not depend on the value of `*package*` at any time.

   Note that specifying it to use *local nicknames* of the `#:CL-USER` package would risk breaking the existing code, since it is allowed to add local nicknames to the `#:CL-USER` package.

1.5 Links

See CLHS 22.3.5.4 Tilde Slash: Call Function.