

File created: 8-May-86 13:28:01 {POGO:PARC:XEROX}<LOOPS>SOURCES>LOOPS-STATS.;7

changes to: (FNS Dump-Loops-Stats Initialize-Loops-Stats FetchMethodOrHelp-stats)  
(VARS LOOPS-STATSCOMS)

previous date: 7-May-86 19:29:48 {POGO:PARC:XEROX}<LOOPS>SOURCES>LOOPS-STATS.;6

Read Table: OLD-INTERLISP-FILE

Package: INTERLISP

Format: XCCS

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#### (RPAQQ **LOOPS-STATSCOMS**

```
(( * * Replacement functions for some standard Loops fns)
(FNS BlankInstance-stats FetchMethod-stats FetchMethodOrHelp-stats FindSuperMethod-stats
  GetSuperMethod-stats GetValue-stats PutValue-stats)
(* * Fns for controlling gathering of stats)
(FNS Dump-Loops-Stats Initialize-Loops-Stats Loops-Stats)
[VARS (*Loops-Stats-Replaced-Fns* (QUOTE (BlankInstance FetchMethod FetchMethodOrHelp FindSuperMethod
  GetSuperMethod GetValue PutValue)))
  (*Loops-Stats-Counters* (QUOTE (NumberOfInstancesCreated NumberOfInstancesDestroyed NIL
  NumberOfMessagesSent NumberOfSendSupers NIL
  NumberOfGetIVsLocal NumberOfGetIVsInherited
  NumberOfGetIVsLocalActive NIL NumberOfPutIVLocal
  NumberOfPutIVInherited NumberOfPutIVLocalActive NIL
  NumberOfGetIVPropsLocal NumberOfGetIVPropsInherited
  NumberOfGetIVPropsLocalActive NIL NumberOfPutIVPropsLocal
  NumberOfPutIVPropsInherited NumberOfPutIVPropsLocalActive
  NumberOfPutIVPropsLocalActive NIL NumberOfPutIVPropsLocal
  NumberOfPutIVPropsInherited NumberOfPutIVPropsLocalActive
  NumberOfPutIVLocal NumberOfMessagesSent
  NumberOfSendSupers InitialStorageLeft)
  (GLOBALVARS *Loops-Stats-Counters* *Loops-Stats-Replaced-Fns* NumberOfGetIVPropsInherited
  NumberOfGetIVPropsLocalActive NumberOfGetIVPropsLocal NumberOfGetIVsInherited
  NumberOfGetIVsLocalActive NumberOfGetIVsLocal NumberOfInstancesCreated
  NumberOfPutIVPropsInherited NumberOfPutIVPropsLocalActive NumberOfPutIVPropsLocal
  NumberOfPutIVInherited NumberOfPutIVLocalActive NumberOfPutIVLocal NumberOfMessagesSent
  NumberOfSendSupers InitialStorageLeft)
  (* * Give the user a menu to control stats gathering)
  (INITVARS (Loops-Stats-Menu-Position (create POSITION XCOORD _ 10 YCOORD _ 300)))
  (P (Initialize-Loops-Stats)
    (ADDMENU (create MENU ITEMS _ (QUOTE ("Initialize stats" (Initialize-Loops-Stats)
      "Reinitialize Loops stats counters")
      ("Stats ON" (Loops-Stats)
        "Turn on gathering Loops stats")
      ("Stats OFF" (Loops-Stats T)
        "Turn off gathering Loops stats")
      ("Dump stats" (Dump-Loops-Stats)
        "Dump out Loops stats to a file"))))
      CENTERFLG _ T TITLE _ "Loops Statistics")
    NIL Loops-Stats-Menu-Position)))]
```

(\* \* Replacement functions for some standard Loops fns)

(DEFINEQ

#### (**BlankInstance-stats**

[LAMBDA (class obj unmodifiedFlg)

(\* sml " 7-May-86 19:25")

(\* Comment)

(add NumberOfInstancesCreated 1)  
(BlankInstance-old class obj unmodifiedFlg])

#### (**FetchMethod-stats**

[LAMBDA (classRec selector)

(\* sml " 7-May-86 19:28")

(\* Replaces FetchMethod, counts the number of messages sent)

(change NumberOfMessagesSent (ADD1 DATUM))  
(FetchMethod-old classRec selector])

#### (**FetchMethodOrHelp-stats**

[LAMBDA (self selector)

(\* sml " 8-May-86 13:16")

(\* Count the number of calls to FetchMethodOrHelp)

(add NumberOfMessagesSent 1)  
(if (EQ selector (QUOTE DestroyInstance))  
 then (add NumberOfInstancesDestroyed 1))  
(FetchMethodOrHelp-old self selector])

#### (**FindSuperMethod-stats**

[LAMBDA (object selector classOfSendingMethod)

(\* sml " 5-May-86 16:53")

(\* Replaces the function FindSuperMethod)

(add NumberOfSendSupers 1)
(FindSuperMethod-old object selector classOfSendingMethod])

(GetSuperMethod-stats

[LAMBDA (object selector callerName) (\* sml " 5-May-86 17:03")

(\* Comment)

(change NumberOfSendSupers (ADD1 DATUM))
(GetSuperMethod-old object selector callerName])

(GetValue-stats

[LAMBDA (self varName propName) (\* sml " 5-May-86 17:03")

(\* Replace the function GetValue)

[LET ((localValue (GetIVHere self varName propName)))
(COND
[propName (if (NotSetValue localValue)
then (change NumberOfGetIVPropsInherited (ADD1 DATUM))
elseif (type? activeValue localValue)
then (change NumberOfGetIVPropsLocalActive (ADD1 DATUM))
else (change NumberOfGetIVPropsLocal (ADD1 DATUM))
(T (if (NotSetValue localValue)
then (change NumberOfGetIVsInherited (ADD1 DATUM))
elseif (type? activeValue localValue)
then (change NumberOfGetIVsLocalActive (ADD1 DATUM))
else (change NumberOfGetIVsLocal (ADD1 DATUM))
(GetValue-old self varName propName])

(PutValue-stats

[LAMBDA (self varName newValue propName) (\* sml " 5-May-86 17:04")

(\* Comment)

[LET ((localValue (GetIVHere self varName propName)))
(COND
[propName (if (NotSetValue localValue)
then (change NumberOfPutIVPropsInherited (ADD1 DATUM))
elseif (type? activeValue localValue)
then (change NumberOfPutIVPropsLocalActive (ADD1 DATUM))
else (change NumberOfPutIVPropsLocal (ADD1 DATUM))
(T (if (NotSetValue localValue)
then (change NumberOfPutIVInherited (ADD1 DATUM))
elseif (type? activeValue localValue)
then (change NumberOfPutIVLocalActive (ADD1 DATUM))
else (change NumberOfPutIVLocal (ADD1 DATUM))
(PutValue-old self varName newValue propName])

(\* Fns for controlling gathering of stats)

(DEFINEQ

(Dump-Loops-Stats

[LAMBDA (fileName) (\* sml " 8-May-86 13:25")

(\* Dump out the Loops stats to a file)

(DECLARE (GLOBALVARS LoopsDate))
(LET [(outStream (OPENSTREAM (OR fileName (PROMPTFORWORD "Name of file for Loops stats? "
"{DSK}Loops-stats.txt" NIL PROMPTWINDOW))
(QUOTE OUTPUT)
(QUOTE NEW)
(printout outStream T "Loops statistics dumped " (DATE)
" by "
(FULLUSERNAME)
T T "Loops date " LoopsDate T T)
(if (GETD (QUOTE PRINT-LISP-INFORMATION))
then (PRINT-LISP-INFORMATION outStream)
(printout outStream T T))
(AND (GETD (QUOTE STORAGE.LEFT))
(printout outStream "Storage left at beginning of run: " "FreeDataPages=" (CAR InitialStorageLeft)
, "FreeAtomPages=" (CADDR InitialStorageLeft)
T "Storage left at end of run: " "FreeDataPages=" (CAR (STORAGE.LEFT))
, "FreeAtomPages=" (CADDR (STORAGE.LEFT))
T T))
(for var in \*Loops-Stats-Counters\* do (if (NULL var)
then (TERPRI outStream)

```

else (printout outputStream var .TAB 50 (EVALV var)
      T))
(CLOSEF outputStream)
(printout PROMPTWINDOW T "Done dumping Loops stats" T))

```

**(Initialize-Loops-Stats**

```

[LAMBDA NIL (* sml " 8-May-86 13:10")

```

(\* Reinitialize Loops stats counters)

```

(for var in *Loops-Stats-Counters* when (NOT (NULL var)) do (SET var 0))
(AND (GETD (QUOTE STORAGE.LEFT))
      (SETQ InitialStorageLeft (STORAGE.LEFT)))
(PROMPTPRINT "Loops stats are initialized")

```

**(Loops-Stats**

```

[LAMBDA (off?) (* sml " 7-May-86 19:27")

```

(\* Turn stat gathering on or off)

```

(COND
  (off? (for fn in *Loops-Stats-Replaced-Fns* do (MOVD (PACK* fn "-old")
                                                       fn)
              (PROMPTPRINT "Loops stats gathering is OFF")))
  (T (for fn in *Loops-Stats-Replaced-Fns* do (MOVD? fn (PACK* fn "-old")
                                                       (MOVD (PACK* fn "-stats")
                                                       fn)
              (PROMPTPRINT "Loops stats gathering is ON"])))
)

```

```

(RPAQQ *Loops-Stats-Replaced-Fns* (BlankInstance FetchMethod FetchMethodOrHelp FindSuperMethod GetSuperMethod
                                       GetValue PutValue))

```

```

(RPAQQ *Loops-Stats-Counters* (NumberOfInstancesCreated NumberOfInstancesDestroyed NIL NumberOfMessagesSent
                               NumberOfSendSupers NIL NumberOfGetIVsLocal NumberOfGetIVsInherited
                               NumberOfGetIVsLocalActive NIL NumberOfPutIVLocal NumberOfPutIVInherited
                               NumberOfPutIVLocalActive NIL NumberOfGetIVPropsLocal
                               NumberOfGetIVPropsInherited NumberOfGetIVPropsLocalActive NIL
                               NumberOfPutIVPropsLocal NumberOfPutIVPropsInherited
                               NumberOfPutIVPropsLocalActive))

```

```

(DECLARE: DOEVAL@COMPILE DONTCOPY

```

```

(GLOBALVARS *Loops-Stats-Counters* *Loops-Stats-Replaced-Fns* NumberOfGetIVPropsInherited
             NumberOfGetIVPropsLocalActive NumberOfGetIVPropsLocal NumberOfGetIVsInherited NumberOfGetIVsLocalActive
             NumberOfGetIVsLocal NumberOfInstancesCreated NumberOfPutIVPropsInherited NumberOfPutIVPropsLocalActive
             NumberOfPutIVPropsLocal NumberOfPutIVInherited NumberOfPutIVLocalActive NumberOfPutIVLocal
             NumberOfMessagesSent NumberOfSendSupers InitialStorageLeft)
)

```

(\* Give the user a menu to control stats gathering)

```

(RPAQ? Loops-Stats-Menu-Position (create POSITION XCOORD _ 10 YCOORD _ 300))

```

**(Initialize-Loops-Stats)**

```

(ADDMENU (create MENU
  ITEMS _ (QUOTE (("Initialize stats" (Initialize-Loops-Stats)
                    "Reinitialize Loops stats counters")
                ("Stats ON" (Loops-Stats)
                    "Turn on gathering Loops stats")
                ("Stats OFF" (Loops-Stats T)
                    "Turn off gathering Loops stats")
                ("Dump stats" (Dump-Loops-Stats)
                    "Dump out Loops stats to a file"))))
  CENTERFLG _ T
  TITLE _ "Loops Statistics")
NIL Loops-Stats-Menu-Position)

```

```

(PUTPROPS LOOPS-STATS COPYRIGHT ("Xerox Corporation" 1986))

```

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