

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
  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 outStream var .TAB 50 (EVALV var)
      T))
(CLOSEF outStream)
(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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FUNCTION INDEX

BlankInstance-stats .....	FetchMethodOrHelp-stats .1	GetValue-stats .....	PutValue-stats .....
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VARIABLE INDEX

*Loops-Stats-Counters* .....	*Loops-Stats-Replaced-Fns* .....	Loops-Stats-Menu-Position .....
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