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## LOOPSBACKWARDS

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### INTRODUCTION

LOOPSBACKWARDS allows you to run files which were previously converted from the Buttriss release of Xerox LOOPS to the Koto release. Unlike the Koto version of LOOPSBACKWARDS conversion methods for moving files from Buttriss LOOPS to Koto LOOPS are included but **not supported**. *We strong recommend that you convert LOOPS source code from Buttriss to Koto using the Koto release of LOOPS.* Conversion of Koto LOOPS source code to Lyric LOOPS is done using the CONVERSION-AIDS users' module.

The changes between the Buttriss and Koto releases are described in detail in the *Xerox LOOPS Release Notes* for the **Koto** release. Old features that are included in LOOPSBACKWARDS are summarized here:

- Many functions that were removed from the Buttriss release are defined.
- The messages **List** and **List!** are available.
- The operation of old style active values, from the Buttriss release, are provided.
- Support for reading old style macros, such as `$(localState getFn putFn)` or `#$Mumble`, is available.

LOOPSBACKWARDS is an unsupported LOOPS users module. It is strongly recommended that it only be used as part of an effort to upgrade very old LOOPS code to newer releases. It will allow very old LOOPS code to run well enough that it can be rewritten for a newer release.

### INSTALLATION

LOOPSVCOPY will be automatically loaded by LOOPSBACKWARDS.

## FUNCTIONS

LOOPSBACKWARDS includes **ExplicitFnActiveValue** and **DefAVP**. **ExplicitFnActiveValue** allows the user code triggered by Get- or Put- accesses to be stored within functions which are pointed to by instance variables rather than requiring the redefinition of **GetWrappedValue** or **PutWrappedValue**. These functions must have the form specified in the **DefAVP** function.

**ExplicitFnActiveValue**

[Class]

**Purpose:** Mimics the behavior of the Buttruss style of active values.

**Behavior:** Get- accesses to the wrapped variable cause the **getFn** to be called, Put- accesses cause **putFn** to be called. Enables the old style activeValue to look like the new style without changing any functionality.

The **getFn** is called by the **ExplicitFnActiveValue GetWrappedValue** method. This method passes to the **getFn** the arguments defined by **DefAVP** as described in the *Xerox LOOPS Users' Modules*.

The **putFn** is called by the **ExplicitFnActiveValue PutWrappedValue** method. This method passes to the **putFn** the arguments defined by **DefAVP** as described in the *Xerox LOOPS Users' Modules*.

**Instance Variables:** **localState** A place for data storage.

**getFn** The name of a function applied when the active variable is read.

**putFn** The name of a function applied when the active variable is changed.

**Example:**

```
32_ ( _ ($ Bin) New 'bin4)
#, ($& Bin (|DAW0.1Y:.H53.]99| . 521))

33_ ( _ ($ ExplicitFnActiveValue) New 'EFAV1)
#, ($& ExplicitFnActiveValue (|DAW0.1Y:.H53.]99| . 522))

34_ (DEFINEQ (PrintOnGet
              (self varName localSt propName activeVal type)
              (PRINTOUT T "I am:" , activeVal T) localSt))
(PrintOnGet)

35_ (_@ ($ EFAV1) getFn 'PrintOnGet)
PrintOnGet

36_ ( _ ($ EFAV1) AddActiveValue ($ bin4) 'height)
#, ($A #,NestedNotSetValue PrintOnGet NIL)

37_ (_@ ($ bin4) height 123)
123

38_ (@ ($ bin4) height)
```

```
I am: #, ($ EFAV1)
123
```

**(DefAVP *fnName putFlg*)** [Function]

**Purpose:** Creates a template for defining an active value function.

**Behavior:** Creates a template and leaves you in the Interlisp function display editor.

**Arguments:** *fnName*      Name of the function.  
                   *putFlg*      T indicates function is a **putFn**, NIL indicates a

**getFn.**

**Returns:** The function name on exit from the editor .

**Example:** In each of the following cases the template only is shown. User code is to be added immediately after the comment by using the display editor.

```
66_(DefAVP 'AGetFn)
AGetFn
```

```
67_PP* AGetFn
(AGetFn
  [LAMBDA (self varName localSt propName activeVal type)
    (* This is a getFn. The value of this getFn is
       returned as the value of the enclosing GetValue.)
    localSt])
(AGetFn)
```

```
68_(DefAVP 'APutFn T)
APutFn
```

```
69_PP* APutFn
(APutFn
  [LAMBDA (self varName newValue propName activeVal type)
    (* This is a putFn. ***NOTE*** The value of this
       function will be returned as the value of any enclosing
       PutValue. This usually means that you want to return the value
       returned by PutLocalState.)
    (PutLocalState activeVal newValue self varName propName
       type)])
(APutFn)
```

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