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arMulti.h File Reference

ARToolkit multi pattern subroutines. [More...](#)

```
#include <stdio.h>
#include <AR/config.h>
#include <AR/param.h>
#include <AR/ar.h>
```

Data Structures

struct	ARMultiEachMarkerInfoT <i>multi-marker structure More...</i>
struct	ARMultiMarkerInfoT <i>global multi-marker structure More...</i>

Functions

ARMultiMarkerInfoT *	arMultiReadConfigFile (const char *filename) <i>loading multi-markers description from a file</i>
double	arMultiGetTransMat (ARMarkerInfo *marker_info, int marker_num, ARMultiMarkerInfoT *config) <i>compute camera position in function of the multi-marker patterns (based on detected markers)</i>
int	arMultiActivate (ARMultiMarkerInfoT *config) <i>activate a multi-marker pattern on the recognition procedure.</i>
int	arMultiDeactivate (ARMultiMarkerInfoT *config) <i>Desactivate a multi-marker pattern on the recognition procedure.</i>
int	arMultiFreeConfig (ARMultiMarkerInfoT *config) <i>remove a multi-marker pattern from memory.</i>
double	arsMultiGetTransMat (ARMarkerInfo *marker_infoL, int marker_numL, ARMarkerInfo *marker_infoR, int marker_numR, ARMultiMarkerInfoT *config)

Detailed Description

ARToolkit multi pattern subroutines.

This file extend ar core routines for multi-pattern tracking. You can obtain position of a local coordinate system based on the estimation of multiple markers tracking (each in relative position)

Remarks:

more efficient with uniform planar configuration

History :

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Version:

1.0

Date:

01/09/05

Function Documentation

```
int arMultiActivate( ARMultiMarkerInfoT * config )
```

activate a multi-marker pattern on the recognition procedure.

Activate a multi-marker for be checking during the template matching operation.

Parameters:

config pointer to the multi-marker

Returns:

0 if success, -1 if error

```
int arMultiDeactivate( ARMultiMarkerInfoT * config )
```

Desactivate a multi-marker pattern on the recognition procedure.

Desactivate a multi-marker for not be checking during the template matching operation.

Parameters:

config pointer to the multi-marker

Returns:

0 if success, -1 if error

```
int arMultiFreeConfig( ARMultiMarkerInfoT * config )
```

remove a multi-marker pattern from memory.

desactivate a pattern and remove it from memory. Post-condition of this function is unavailability of the multi-marker pattern.

Parameters:

config pointer to the multi-marker

Returns:

0 if success, -1 if error

```
double arMultiGetTransMat( ARMarkerInfo * marker_info,  
                           int marker_num,  
                           ARMultiMarkerInfoT * config  
                           )
```

compute camera position in function of the multi-marker patterns (based on detected markers)

calculate the transformation between the multi-marker patterns and the real camera. Based on confident values of detected markers in the multi-markers patterns, a global position is return.

Parameters:

marker_info list of detected markers (from arDetectMarker)

marker_num number of detected markers

config

Returns:

```
ARMultiMarkerInfoT* arMultiReadConfigFile( const char * filename )
```

loading multi-markers description from a file

Load a configuration file for multi-markers tracking. The configuration file furnishes pointer to each pattern description.

Parameters:

filename name of the pattern file

Returns:

a pattern structure, NULL if error

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