

com._604robotics.robot2012.vision.config

Class Config

java.lang.Object

com._604robotics.robot2012.vision.config.Config

```
public class Config
extends java.lang.Object
```

The configuration of the Team 604 FRCVision

Field Summary

Fields

Modifier and Type	Field and Description
boolean	<code>checkCenter</code> Should the tiling algorithm check the center of the tile, as well as the corners to determine if it should be considered for being in the target?
double	<code>color_mulB</code> How much to multiply the square of the errors per color channel by
double	<code>color_mulG</code> How much to multiply the square of the errors per color channel by
double	<code>color_mulR</code> How much to multiply the square of the errors per color channel by
int	<code>color_targetB</code> The color of the vision target when the light is shining on it
int	<code>color_targetG</code> The color of the vision target when the light is shining on it
int	<code>color_targetR</code> The color of the vision target when the light is shining on it
boolean	<code>communicateToRobot</code> Should this program attempt to communicate to the robot?
boolean	<code>debug_Print</code> Should debug info be shown? This includes time per frame, number of visible targets, and estimated position of visible targets.
boolean	<code>debug_SaveImagesToFiles</code> Should camera images be stored onto disk, for debug purposes?
boolean	<code>debug_ShowDisplay</code> Should the fancy display be shown, with green and red tiles indicating matching and non-matching tiles, with blue lines and dots indicating target sides and corners?
int	<code>minBlobSize</code> A calibration constant indicating the minimum size for a potential target to be considered.
boolean	<code>scanWholeTile</code> Should all pixels in every tile be scanned, or just the corners (and possibly center)
byte	<code>sensitivity</code> A constant between -128 to +127 indicating how sensitive the color acceptance of the target should be.
int	<code>tileSize</code> The size of each tile in the vision processing.

Constructor Summary

Constructors

Constructor and Description
<code>Config()</code>

Method Summary

Methods

Modifier and Type	Method and Description
-------------------	------------------------

static Config	readConfig (java.io.File file) Read a Config from a file
static Config	readDefaultConfig () Reads the default Config file
void	save (java.io.File file) Saves this Config to a given file
void	saveDefaultConfig () Saves this Config to the default file
java.lang.String	toString ()

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, wait, wait, wait

Field Detail
checkCenter public boolean checkCenter Should the tiling algorithm check the center of the tile, as well as the corners to determine if it should be considered for being in the target?
communicateToRobot public boolean communicateToRobot Should this program attempt to communicate to the robot?
debug_Print public boolean debug_Print Should debug info be shown? This includes time per frame, number of visible targets, and estimated position of visible targets.
debug_SaveImagesToFiles public boolean debug_SaveImagesToFiles Should camera images be stored onto disk, for debug purposes?
debug_ShowDisplay public boolean debug_ShowDisplay Should the fancy display be shown, with green and red tiles indicating matching and non-matching tiles, with blue lines and dots indicating target sides and corners?
minBlobSize public int minBlobSize A calibration constant indicating the minimum size for a potential target to be considered. This number is given in square "tiles", with tileSize pixels side lengths
scanWholeTile public boolean scanWholeTile Should all pixels in every tile be scanned, or just the corners (and possibly center)
sensitivity public byte sensitivity A constant between -128 to +127 indicating how sensitive the color acceptance of the target should be. Lower numbers will allow more pixels, while higher numbers will eliminate more. This number needs to be chosen high enough to reduce or eliminate false positives, but it needs to be low enough to not generate false negatives.
tileSize

```
public int tileSize
```

The size of each tile in the vision processing. This is represented in pixels. It should be a number chosen large enough to have a good speed, but small enough to not miss a target in the image.

color_targetR

```
public int color_targetR
```

The color of the vision target when the light is shining on it

color_targetG

```
public int color_targetG
```

The color of the vision target when the light is shining on it

color_targetB

```
public int color_targetB
```

The color of the vision target when the light is shining on it

color_mulR

```
public double color_mulR
```

How much to multiply the square of the errors per color channel by

color_mulG

```
public double color_mulG
```

How much to multiply the square of the errors per color channel by

color_mulB

```
public double color_mulB
```

How much to multiply the square of the errors per color channel by

Constructor Detail

Config

```
public Config()
```

Method Detail

readDefaultConfig

```
public static Config readDefaultConfig()
```

Reads the default Config file

Returns:

the Config, as read from vision.conf

saveDefaultConfig

```
public void saveDefaultConfig()
        throws java.io.IOException
```

Saves this Config to the default file

Throws:

java.io.IOException - If an error occurs

java.io.IOException - If an error occurs

readConfig

```
public static Config readConfig(java.io.File file)
```

Read a Config from a file

Parameters:

`file` - the file to read it from

Returns:

the Config read from the file

save

```
public void save(java.io.File file)
    throws java.io.IOException
```

Saves this Config to a given file

Parameters:

`file` - The file to save to

Throws:

java.io.IOException - If an error occurs

toString

```
public java.lang.String toString()
```

Overrides:

toString in class java.lang.Object

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Summary: Nested | Field | Constr | Method **Detail:** Field | Constr | Method