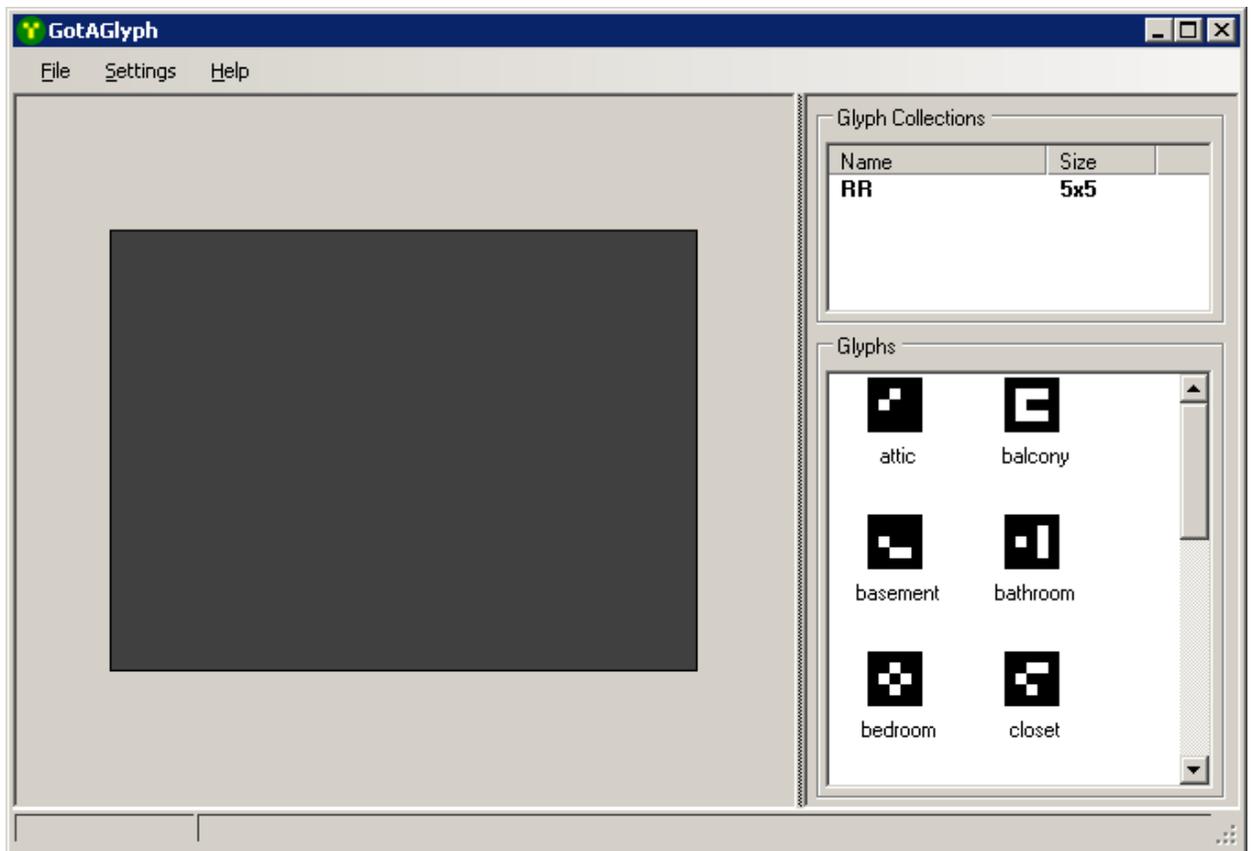


GotAGlyph

User Guide version 1.2.0



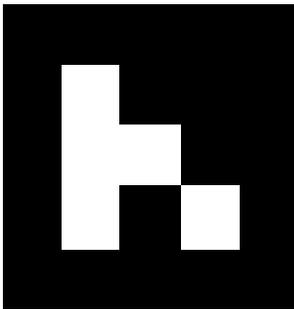
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1. Introduction

GotAGlyph is a Glyph recognition application and is an adaptation of [GRAFT](#) (Glyph Recognition and Tracking Framework). The principle difference from GRAFT is an added TCP socket based server API (port 9050) for communication. Glyphs are typically employed as a powerful means of determining position based on the Glyph's known location.



1-1 Example of a Glyph

Glyphs are a grid pattern of white squares on a black background. The high contrast between the white and black coupled with the square shapes and 2D planar nature yield an easy to identify image.

Additional information and the latest version of the software may be found on the website: <http://GotABot.weebly.com/>.

Important Safety Information

Although great effort has been taken to debug GotAGlyph, it is a "Use at your own risk" type program. Please use common sense and follow all safety instructions.

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2. Getting Started

Installation

The recommended minimum requirements of the computer are:

- Pentium® III class, Intel® Celeron®, or AMD processor, or better – 2 GHz or faster
- Windows XP or better
- 256 MB RAM
- 50 MB of free Hard Disk Space

GotAGlyph is a portable application and it may be unzipped or copied to any convenient directory.

3. GotAGlyph Configuration

Additional details may be found at <http://www.aforgenet.com/projects/gratf/>.

Glyph Size

Distance to a Glyph is calculated assuming that Glyphs are of a fixed size of 4.25" square:

|----- 4.25"-----|

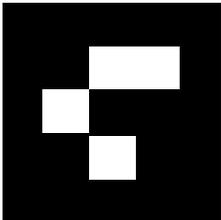


Figure 3-1 Glyph Size

4. Operation

- 1) Start GotAGlyph
- 2) Choose a video source (Click *File->Local Video Capture Device* or *File->Network Video Device*)

Additional details may be found at <http://www.aforgenet.com/projects/gratf/>.

5. API

GotAGlyph provides an optional socket based interface through which other programs may control operations. This interface supports the API (Application Program Interface). The API is accessed by opening a TCP/IP socket to GotAGlyph and using simple text commands.

Accessing the API through Telnet

Accessing the API can be as simple as using a Telnet session. Although manual telnet control may have limited practical applications, it is very useful for debugging the commands and their sequences before implementing them in a script or program.

There are many different telnet programs but, as an example, here is how one could telnet to GotAGlyph using the telnet program provided with Windows XP:

- 1) On the PC which will run the telnet program, click the **Start** button (lower left corner of your screen).
- 2) Click **Run** and type: *"telnet <ip address> 9050"*

Where the <ip address> is the ip address of the PC running GotAGlyph

An example could be *"telnet 192.168.1.150 9050"*

- 3) Once logged in, any of the API [commands](#) may be used.

API Commands

GotAGlyph supports the following API commands:

glyph

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Glyph Command

This command will retrieve a list of glyph coordinates in the form:

object "glyph name" 10 20 PixelX PixelY Distance(cm)

Example

COMMAND: *"glyph"*

RESPONSE: *"object "pantry" 10 20 55 450 221"*
"object "kitchen" 10 20 333 121 467"
OK >

ACTION: In this example, glyphs 'pantry' and 'kitchen' have been detected. Pantry is centered at horizontal pixel 55 and vertical pixel 450, and is 221 cm distant. Kitchen is centered at 333, 121 at a distance of 467 cm.

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GLOSSARY

- API** Application Program Interface.
- FOV** Field Of View. The horizontal angle, in degrees, captured by the camera.
- Glyph** A Glyph is a high contrast image designed to be easily recognizable by a computer vision program. It is composed of a rectangular grid of white squares on a square black background, which in turn is on a larger white background.
- YMMV** Your Mileage Might Vary.