

```
source "pi/critclUtils.tcl"
```

```
set cc [c create]
```

```
if {[info hostname] != "scoriae.local"} {
```

```
    $cc cflags -I$::env(HOME)/apriltag -Wall -Werror $
```

```
} else {
```

```
    $cc cflags -I/Users/osnr/aux/apriltag -Wall -Werror
```

```
}
```

```
$cc code {
```

```
    #include <apriltag.h>
```

```
    #include <tagStandard52h13.h>
```

```
    apriltag_family_t *tf = NULL;
```

```
    #define emit(...) i += sprintf(&ret[i], __VA_ARGS__)
```

```
}
```

```
$cc proc tagImageForId {int id} char* {
```

```
    if (tf == NULL) tf = tagStandard52h13_create();
```

```
    image_u8_t* image = apriltag_to_image(tf, id);
```

```
    char* ret = Tcl_Alloc(10000);
```

```
    int i = 0;
```

```
    emit("gsave\n");
```

```
    emit("0 1 translate\n");
```

```
    emit("%f %f scale\n", 1.0/image->width, -1.0/image->height);
```

```
    for (int row = 0; row < image->height; row++) {
```

```
        for (int col = 0; col < image->width; col++) {
```

```
            uint8_t pixel = image->buf[(row * image->stride) + col];
```

```
            emit("%d setgray ", pixel != 0);
```

```
            emit("newpath ");
```

```
            emit("%d %d moveto ", col, row); // bottom-left
```

```
            emit("%d %d lineto ", col + 1, row); // bottom-right
```

```
            emit("%d %d lineto ", col + 1, row + 1); // top-right
```

```
            emit("%d %d lineto ", col, row + 1); // top-left
```

```
            emit("closepath fill ");
```

```
        }
```

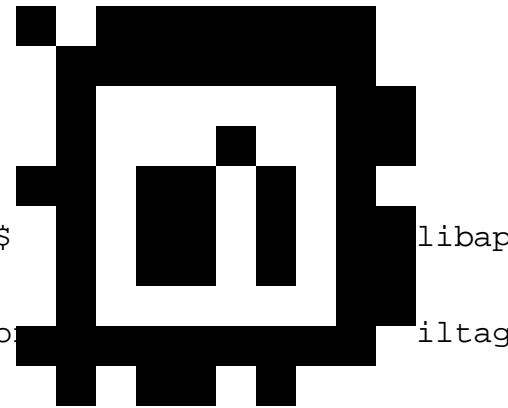
```
        emit("\n");
```

```
    }
```

```
    emit("grestore\n");
```

```
    ret[i++] = '\0';
```

```
    image_u8_destroy(image);
```



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