# OckamSoft 5 EyeApp™

This document describes EyeApp™, the mobile app for OS5. EyeApp provides OS5 displays to <u>any</u> device <u>anywhere</u> that has a web browser. The available pages include most of the pages available to Race and Vysion (see OS5pages.pdf for details).

How it works

EyeApp runs a web server on your local PC that puts up web pages containing OS5 data. Any device browser with access can display these pages, and if allowed, can control the instrument system.
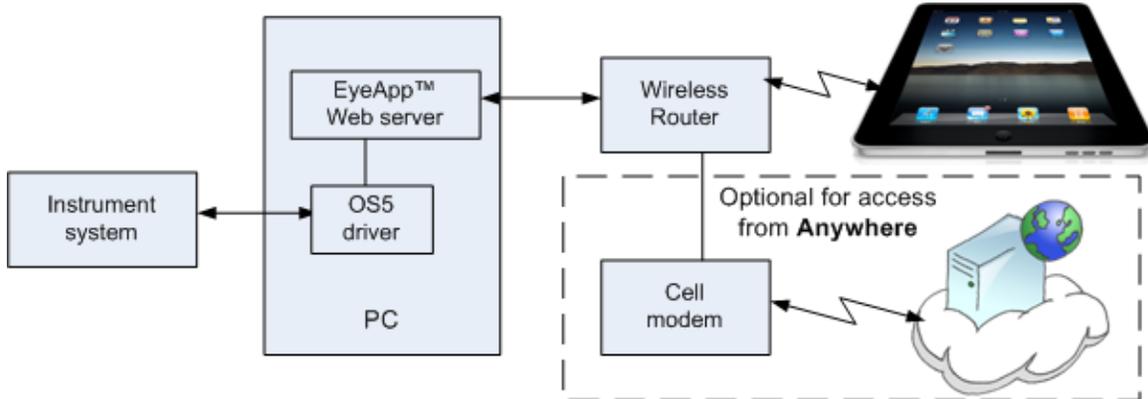
Prerequisites

- An Ockam instrument system with serial port or LANbridge. Optionally, a NMEA-0183 feed over serial from any instrument system may be used.

- An onboard PC with Ethernet to run EyeApp (the server) and the OS5 driver.

- An onboard Ethernet network with wireless router. For details, refer to Setting up an Onboard Network (Ockam website, Tech hub page 2).

- Wired or wireless device(s) with a web browser.

Registration

EyeApp is a registered component of OS5. Security is based on **keys**. When EyeApp is purchased, it receives one or more **boat keys**. Additional keys may be purchased at any time as needed. Registration details are described below.

EyeApp issues a boat key to a device (**authorizes**) when it makes first contact, in order for it to gain access. After that, the device will automatically re-connect at any time. The owner can revoke authorization, after which the device must be re-authorized.

When a device connects to EyeApp, it shows up in the Clients tab as (Unauthorized). The device will either show screens for 5 minutes (demo mode), or the Unauthorized screen (if "Do not allow demo" is checked).

A key can be issued to more than one device, but only one of the key holders at a time will be allowed to connect.

Starting and setting up EyeApp

1. Start the driver. For more detail, refer to OS5.pdf.
   - Enable the simulator if necessary, to produce live output.
   - Be sure you have a UDP broadcast running.

2. Start EyeApp (Start, All Programs, OckamSoft 5, Start EyeApp).

   The server tab shows the state of the server. Press "Start web server".

3. With the server running, you can press "Browse to" to bring up the PCs browser, or use a QR app and your device's camera to connect the device to the server (or type in the URL if you enjoy that kind of thing).

4. To register EyeApp, go to the Status tab and press "Register EyeApp".

5. Set the boat name and number of keys desired, and then transmit the Uplink code to Ockam.

6. When you get the Unlock code back, enter it in the box and press "Register".

7. At a later time, if you need more keys, go to the Status tab and press "Add Keys".

8. Same procedure as for registration.

Authorizing a device

9. Select both a Boat Key and an unauthorized client and press "Assign". This gives the device a cookie that allows him immediate connection on future visits.

10. After assignment, you can change his access.

11. You can revoke his authorization at any time, at which point he will need re-authorization to view pages.

Pages

12. The page set that clients can access is set in EyeApp (Setup tab, Pages button). The first list is the current page set. You can move and delete page items in this list.

   The second group defines numeric pages. Select items on the left and move them (>) to the right. When complete press Add.

   The third group adds set-piece pages like starting line and racecourse. Some of these page types can have only one instance, so if they are already in the current page set, the button is disabled.
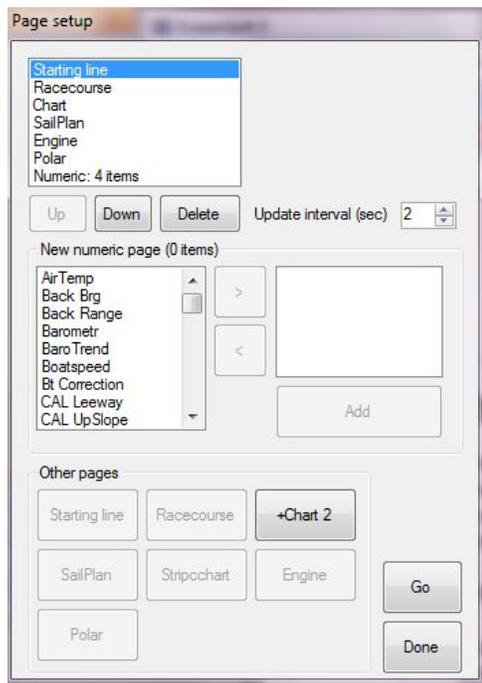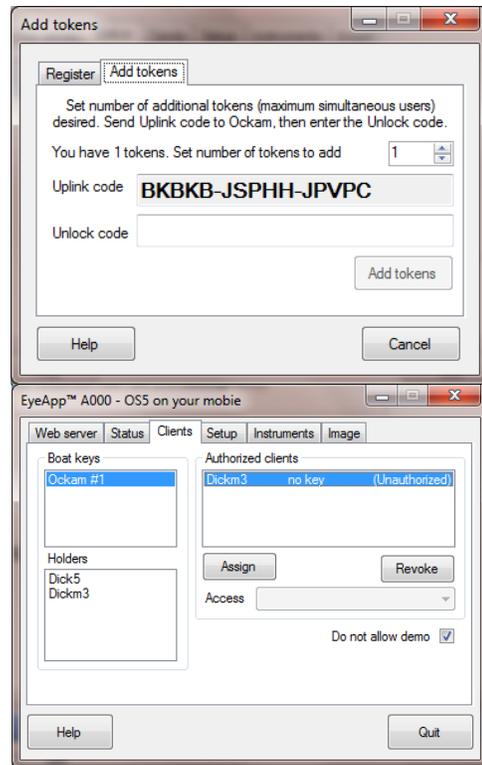
Client settings

Each page has its own setup dialog where features can be turned on and off. Any client can change the features of his page. Some pages also have buttons to control the instrument system, e.g. starting the stopwatch or pinging marks. The client must have full access permission to do this (clients tab, Full access checkbox).

Client main setup

Each page setup has a button to 'Main', where the image size can be adjusted to fit the browser window.

Other setup

Instruments

EyeApp gets instrumentation data from the OS5 driver over the UDP broadcast. Refer to OS5driver.pdf for details.

Charts

OS5 charts are downloaded from the internet. Once downloaded, a connection is no longer needed. Refer to LoadingCharts.pdf for details.

SailPlan™

is a sail crossover chart showing current and next-leg conditions. Refer to SailPlanExplained.pdf for how it works, and BuildingSailPlan.pdf for instructions on how to create and modify it.

Additional setup items

Reserve an IP address for your PC

Devices store cookies in separate storage for each IP address. This means that if your PC changes its IP address, the device cookies (e.g. the authorization cookie) will disappear, and it will have to go thru authorization again. To prevent this from happening, you should configure your router to assign a permanent IP address to your PC. This is usually called **address reservation**.

You should not assign a static IP address to the PC's network card.
Doing so may make your PC unreachable.

This assignment procedure differs for each router model, and is somewhat geeky. You or your *instrument guy* (IG) will have to read up on how to reserve an address. Do a web search specifying your router model and "address reservation".

<u>Letting the world in</u>

You can set up your boat network so anyone on or off the boat can access EyeApp (when you're connected and have authorized them). This procedure requires you to "punch a hole" in your router to forward external requests to your PC. This is usually called **port forwarding**.

This procedure differs for each router model, and is even more geeky than address reservation. It is also a bit dangerous, but since a single port is opened, the danger is minimal. You or your IG will have to read up on how to forward a port. Do a web search specifying your router model and "port forwarding". The actual process requires you to specify the PC's IP address and port number. EyeApp shows the IP address in the Status tab, and the port number in the Server tab.

Once the port forwarding has been set, you use the **WAN IP** address shown in the Status tab to connect from outside. The URL is:

http://*wan.ip.address*:*PortNumber/*

This is the same format as shown in the Server tab. If you have a boat website, you can create a forwarding page to simplify the job of connecting.

```
<!DOCTYPE html PUBLIC "-//W3C//Dtd html 4.0 transitional//EN">
<html>
  <head>
    <meta http-equiv="REFRESH" content="0;url=http://wan.ip.address:PortNumber/">
    <title>My boat's EyeApp</title>
  </head>
  <body>
    <center>
      <font size="+2">
        <b>Redirecting to EyeApp..</b>
      </font>
    </center>
  </body>
</html>
```

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