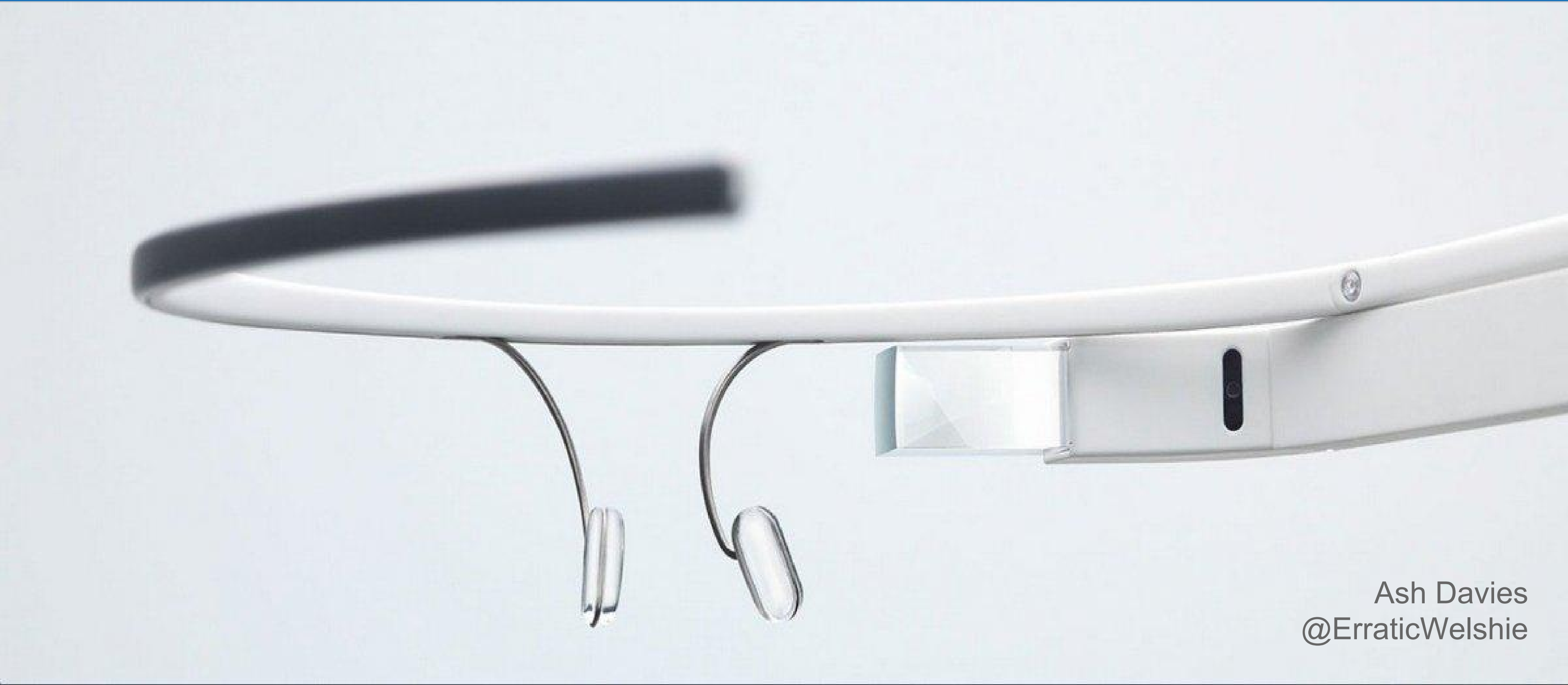
Google Glass



Ash Davies
@ErraticWelshie

Hardware Specifications

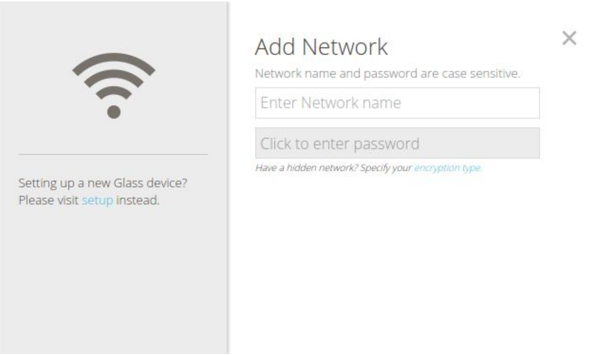
- ➔ Android 4.4 KitKat (XE16)
- ➔ Equivalent to 25” HD screen from 8 ft
- ➔ 5-megapixel camera, 720p video recording
- ➔ Bone conduction audio transducer
- ➔ 43g weight
- ➔ Wi-Fi – 802.11b/g / Bluetooth
- ➔ 12 GB usable memory, 16 GB total
- ➔ Battery allows one day of typical use

Location & Sensors

- ➔ Accelerometer
- ➔ Gravity
- ➔ Gyroscope
- ➔ Light
- ➔ Linear Acceleration
- ➔ Magnetic Field
- ➔ Orientation
- ➔ Rotation Vector

MyGlass

- ➔ Manage Glass with online control panel glass.google.com/myglass
  - ◆ Store WiFi configurations
  - ◆ Last known device location
  - ◆ Store 10 ‘favourite’ contacts
  - ◆ Toggle active Glasswear applications



Setting up a new Glass device? Please visit setup instead.

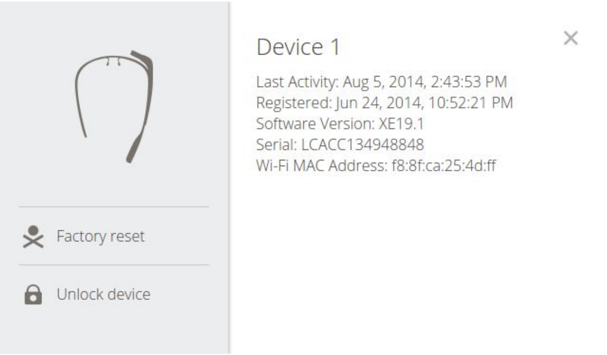
Add Network

Network name and password are case sensitive.

Enter Network name

Click to enter password

Have a hidden network? Specify your encryption type

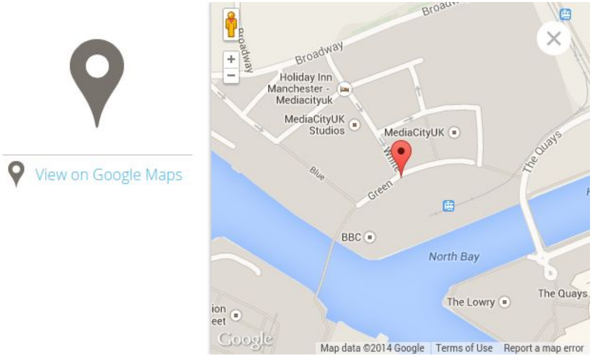


Factory reset

Unlock device

Device 1

Last Activity: Aug 5, 2014, 2:43:53 PM
Registered: Jun 24, 2014, 10:52:21 PM
Software Version: XE19.1
Serial: LCACC134948848
Wi-Fi MAC Address: f8:8f:ca:25:4d:ff



View on Google Maps

Social Acceptance

- Banned in some bars, restaurants
- Issues with driving, prescription lenses
- Makes many people feel uncomfortable
- Many people don’t understand them
- Privacy concerns
- Not fashionable … yet?

Interaction

- Glass runs with no UI
  - Eliminate interfaces to embrace process
- Contextually aware
  - Applications must be aware of surroundings
- Content is secondary to user actions
  - Cannot distract the user

Great talk from Dave Scolombe at London Droidcon 2013 on #NoUI

http://skillsmatter.com/skillscasts/4831-google-glass-and-noui

Where to start?

- ➔ Google Glass GDK (Glass Development Kit)
  - ◆ Android SDK Manager
  - ◆ Glass Development Kit Preview

- ➔ Google Mirror API
  - ◆ RESTful API (Java | PHP | Python | .NET | Ruby)
  - ◆ Authenticate > Create Card > Insert to timeline

GDK Glasswear Design Patterns

- Ongoing Task
  - Live Cards
    - Low Frequency Rendering
    - High Frequency Rendering
- Immersion Mode
  - Outside timeline
  - Standard Android activity

Glass Project Structure

- ➔ Android 4.4 API v19
- ➔ Few native UI elements available
- ➔ Activities used for immersion views
- ➔ Themes not used or used sparingly
- ➔ Most of the work done by services
- ➔ Presentation logic with live cards

Comparison with Android Wear

- Google Glass
  - Priority to native applications
  - Alternative project deployment with Mirror API
  - No integration with NotificationCompat yet

- Android Wear
  - Full NotificationCompat integration
  - Optional native development

Glass Application: Speech

- Speech Recognition Service
- Live card with remotely inflated layout
- Frequency of updating layout
- Accuracy of recognition
- Work provided by service
- Menu as an activity instead of UI component

github.com/ashdavies/com.chaos.speech

What have I learned from Glass?

- ➔ Pioneering wearable computing
- ➔ Alternative potential applications
- ➔ Empowerment from staring at phone
- ➔ Not ready for prime time
- ➔ Hardware limitations
- ➔ Still not widely accepted