

**norwood**  
connect globally, locally™



# World Wi-Fi



**NATIONAL iAWARDS  
FINALIST**

25th Annual  
WAITTA INCITE Awards  
2015-2016  
Most Disruptive  
Technology Award

# Disrupting the world's data access market



We're all hooked on the Internet...

DATA

~~“Love~~ is the water of life”

*Millennials*

[Apologies to Rumi...]



# Need data access when travelling?

## Generally we have only 2 choices:

3G / 4G Roaming?



OR

Wi-Fi Hotspots?





# Cellular Data – 3G/4G



- City-wide, national coverage + international roaming
- **Speed:** 1 to 10 Mbps
- **Cost:** Expensive to use when roaming
- **Quotas:** Subject to tight plan limits



# Unlicensed wireless – Wi-Fi



- 100 millions of public access points now deployed worldwide
- **Speed:** 10 to 100 Mbps
- **Cost:** cheap - in some cases free (!)
- **No quotas** or higher download limits



# Contrasting 3G/4G versus Wi-Fi

	<b>3G/4G</b>	<b>Wi-Fi</b>
Speed	1-10 Mbps	✓ 10-100 Mbps
Quotas	Yes	✓ No
Cost (when travelling)	High	✓ Low/Free
Pervasive	✓ Yes	Not yet
Simple to access	✓ Yes	Not yet
Secure	✓ We think so	No guarantee



## 3 Major issues with Wi-Fi access



- Individual Wi-Fi networks are really **short-range**
  - **Hard to discover**
- Wi-Fi network ownership is highly **fragmented**
  - **Hard to access**
- You **cannot trust** most public Wi-Fi network IDs
  - **Hard to rely on**



# The 3 major issues, summarized



**1. Locality**

**2. Fragmentation**

**3. Security**



**World Wi-Fi** has been developed  
to address these 3 key issues



# Introducing Wi-Fi Search



Augmented Reality view “frequency scales” the Wi-Fi signal, making it “visible”



# Using Search to overcome Locality

## Wi-Fi Search



- A revolutionary new interface for “Wi-Fi search”
- Completely intuitive
- So simple, people of all ages can use it
- Based on making “the invisible”, visible, for the first time
- Patent-pending approach to “translate” the (invisible) Wi-Fi signal into the visible part of the electromagnetic spectrum!



# Introducing our global, federated Wi-Fi footprint



Global footprint at Launch, planned support for more than 40 million accessible Wi-Fi nodes



# Using Federation to overcome Fragmentation



**World Wi-Fi** network discovery & single sign-in



**europa** multi-service federated network



Wi-Fi  
Aggregator 2

Wi-Fi  
Aggregator 3

Wi-Fi  
Aggregator 4



**20 million**  
access points  
(Contract signed)

**20 million**  
access points  
(WIP)

**50 million**  
access points  
(WIP)

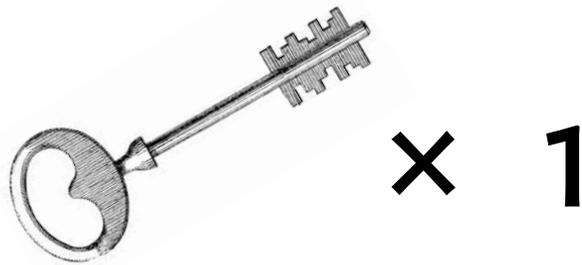
**30 million**  
access points  
(WIP)



**World's largest federated Wi-Fi network:**  
Planned support for 40 million+ access points



# Federation benefits



- Simplicity!
- Single sign-in credential across entire federated network
- Hide all sign-in complexity: captive portal navigation, passwords, etc.
- Network access is funded through low-cost rate per downloaded GB



# Security to overcome fear of the Unknown



Security Services Partner  
(to be announced at launch)

- Monetisable up-sell to add secure VPN tunnel termination to an active Wi-Fi session
- Provides connection to our partner's large, scalable cloud service platforms
- On-demand secure VPN to a nearby high-capacity tunnel termination server cluster
- Premium feature



# Simple to use – an intuitive App interface



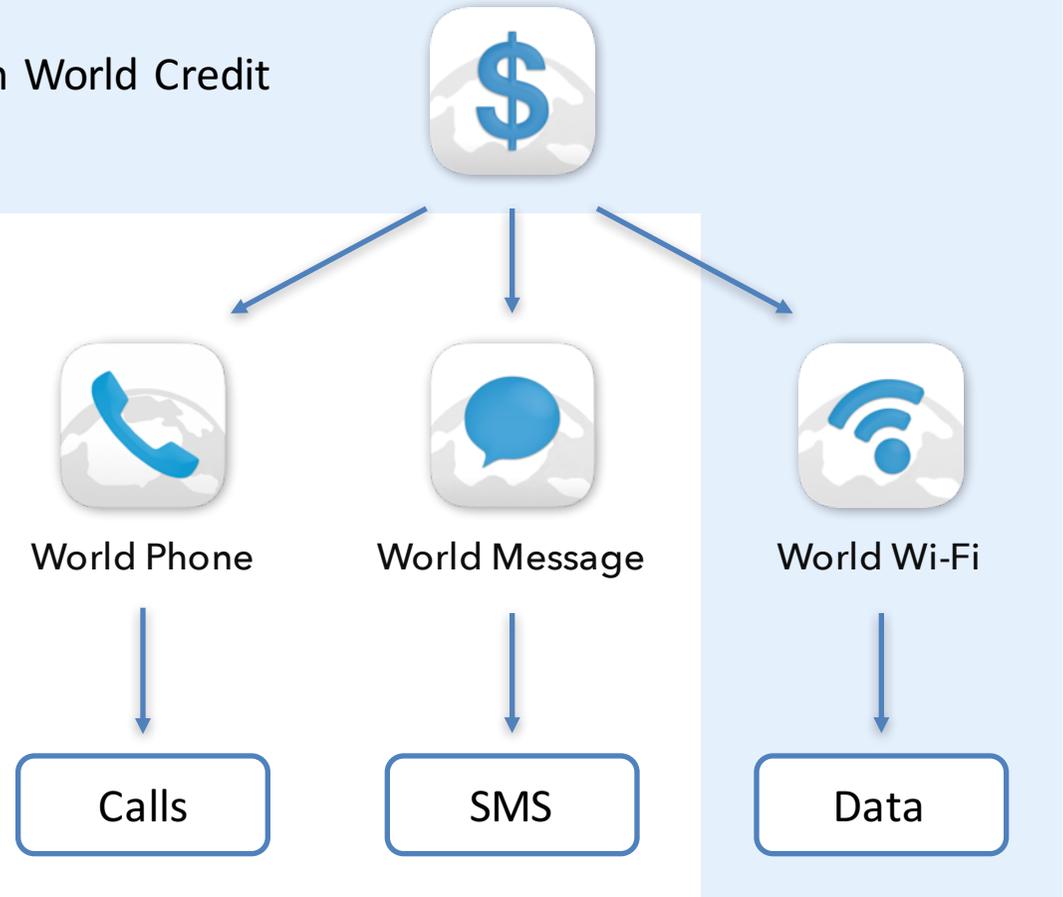


# Powered by World Credit

World App users can purchase common World Credit on any of the three World Apps

Each App is aware of (and displays) the current common credit balance

Each App can use the available common credit balance for calls, SMSs, or data, respectively





# And, patent protected

2 × Granted

**Australian Government**  
IP Australia

**CERTIFICATE OF GRANT**

**Australian Government**  
IP Australia

**CERTIFICATE OF GRANT**  
**STANDARD PATENT**

**2012248121**

The Commissioner of Patents has granted the above patent on 23 June 2016, and certifies that the following are the particulars of this patent appearing in the Register of Patents:

**Name and Address of Patentee(s):**  
Norwood Systems Pty Ltd  
4 Laura St, Nedlands, WA, 6009 Australia

**Name of Actual Inventor(s):**  
Ostergaard, Paul Frederick Norwood, Mason, Andrew Phillip and Wilson, David Alexander

**Title of Invention:**  
Communications

**Term of Patent:**  
Twenty years from 27 April 2012

**Priority Details**

Number	Date	Filed with
2011901585	29 April 2011	AU

Dated this 23<sup>rd</sup> day of June 2016  
Commissioner of Patents

**PATENTS ACT 1990**  
The Australian Patents Register is the official record and should be referred to for the full details pertaining to this IP Right.

1 x Filed

**IP Australia**  
**Patent Request: Standard Patent**

<b>Requested by</b>	O'Sullivan's
<b>Filing date</b>	28/06/2016
<b>Application number</b>	201610000000000000
<b>Invention title</b>	Communications
<b>Address for legal service</b>	O'Sullivan's PO Box 3234 Broadway Nedlands CRAWLEY WA, 6009 AU
<b>Applicants</b>	Norwood Systems Pty Ltd
<b>Inventors</b>	Ostergaard, Paul Frederick Norwood Wilson, David Alexander
<b>Priority claims</b>	
<b>Divisional parent</b>	Parent Application Number



World Wi-Fi

A simple-to-use, integrated, global  
Wi-Fi access utility.

Connect to the the world's largest  
federated Wi-Fi footprint.

Secure, when you need it to be.

# 1 App:



## World Wi-Fi

40,000,000+  
opportunities to  
get connected  
(securely and easily)

### Wi-Fi Search

- Overcome locality & invisibility
- Graphical, intuitive, relevant

### Single sign-in

- Overcome network fragmentation
- Europa federated network
- Global access to 40m+ hotspots (planned size at launch)

### On-demand security

- VPN tunnel termination
- Cloud based, scalable, low latency
- Premium service

## Shipping Q3, 2016



## A World Leader in ‘Sharing Economy’ Telco Services

For further information contact:

Paul Ostergaard

CEO and Founder, Norwood Systems

Office: +61 8 9200 3500

Web: [www.norwoodsystems.com](http://www.norwoodsystems.com)

Twitter: @paulostergaard, @norwoodsystems

Shane Murphy

FTI Consulting

Office: +61 8 9485 8888

Mobile: +61 420 945 291

Twitter: @ShaneWMurphy



# Norwood's World App Ecosystem

