

# Commercial Hotspot Sharing

No WiFi !!

Talk to Each Other

Call your Mom

Pretend it's 1993

Live  
|||

My 'call for sharing' is about commercial and not 'social sharing'

# Christopher Geerdts – Business and Telecoms Consultant

- *8 years* in rural, non-profit work
- 10 years launching data products at MTN
  - GPRS, Edge, Portal etc
- Chair of WAPA (from survival to prominence)
- 4 Businesses
  - Signet (list of first 23 ISPs)
  - XConnect SA (wholesale voice part of Multisource)
  - Consulting business
    - B2B Sales and Telecoms
    - Associate for BMI-TechKnowledge
  - Twenty20
    - Detailed financial ‘health report’ of telecoms businesses



# Commercial Hotspot Sharing

Call to Action

Why is this  
important

Open  
Access in  
the Hotspot  
World

The new  
paradigm

License  
Exempt  
Spectrum

Property  
Issues



Source: BMI-T, 2014



## **What:**

Hotspot sharing is not taking a selfie of your crème brulee

Hotspot sharing is when more than one operator can service a single public Wi-Fi location

Avoided Point-2-point reference

## **Why:**

## **What:**

Hotspot sharing is not taking a selfie of your crème brulee

Hotspot sharing is when more than one operator can service a single public Wi-Fi location

Avoided Point-2-point reference

## **Why:**

~~Sharing is Caring~~

Sharing makes commercial sense ✓

Sharing is good for the customer ✓✓

# Acknowledgment

I make regular reference to the BMI-TechKnowledge report as below:

## **Wi-Fi 2.0: Global and South African Market Impact Taking the market by stealth**

Analysts: Christopher Geerdts, Tim Parle

***September 2014***

In the presentation, I acknowledge use of a concept or data by inserting the following icon:



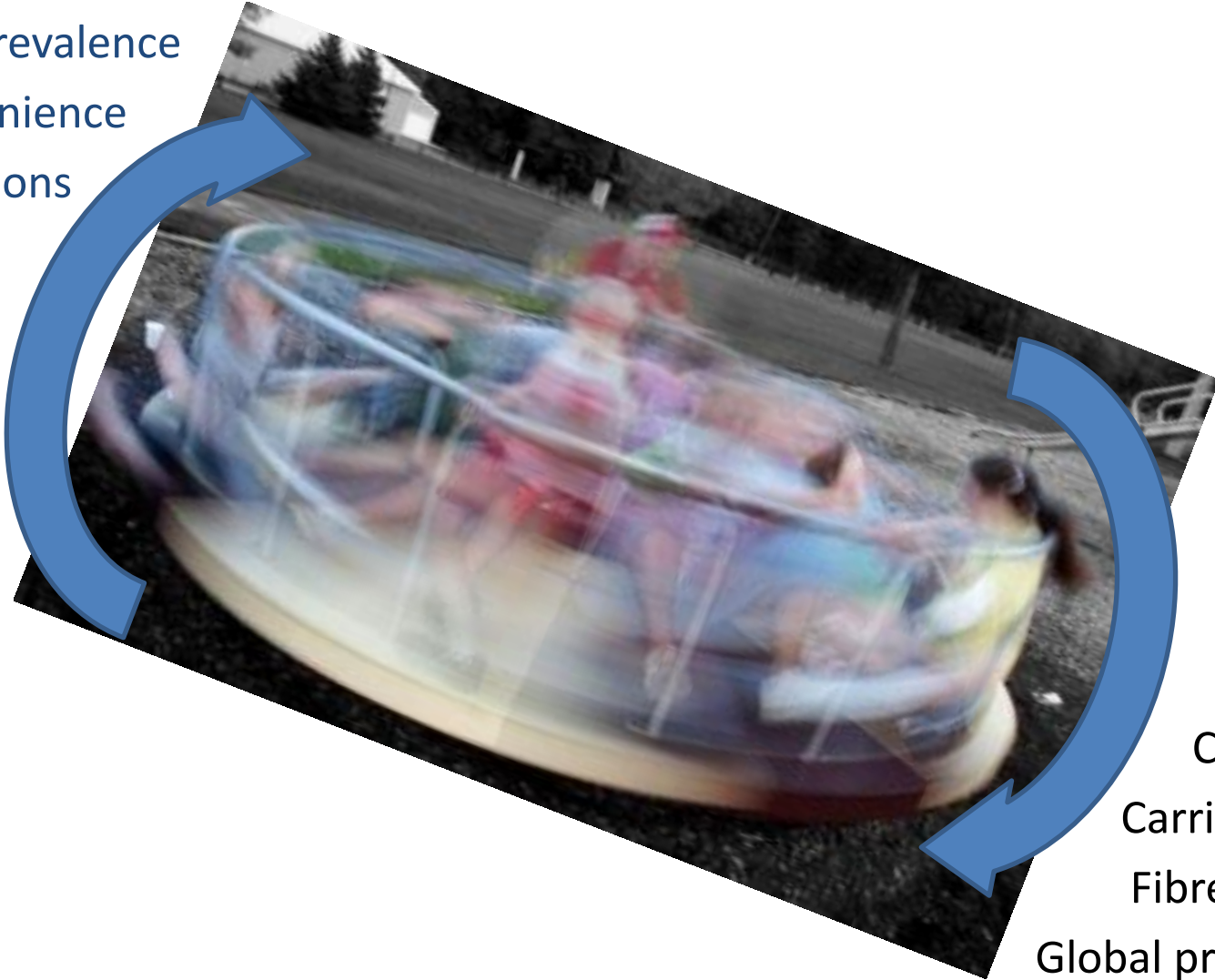


# Wi-Fi : a whole new take on Eco 101: supply and demand



## DEMAND

Smartphone prevalence  
Hotspot convenience  
Cloud applications  
Video content  
Wi-Fi Speeds

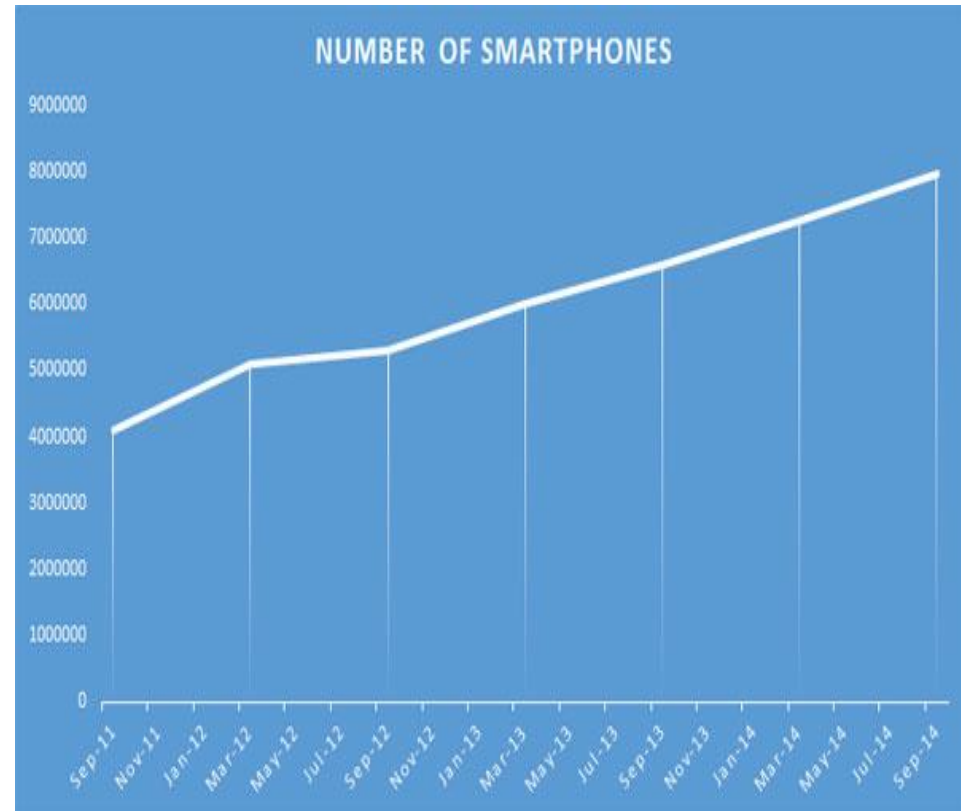


## SUPPLY

Cheaper kit  
Carrier interest  
Fibre backhaul  
Global proliferation  
New revenue models

# Smartphone Proliferation

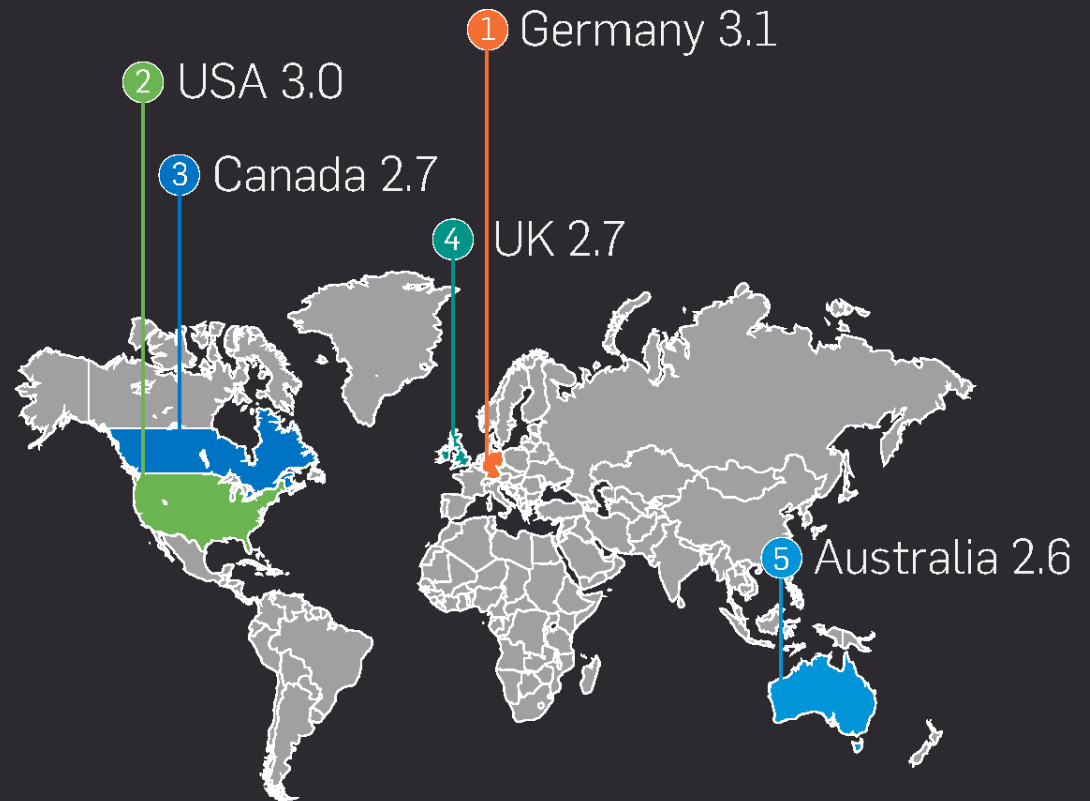
- The smartphone is the de facto connectivity device for South Africans
- Amps 2014B (April 2015): 18 million South African adults (48% of all adults 15+) have a smartphone
- MyBroadband's slide on Vodacom gives an idea of the type of growth (see right:)
- Other Wi-Fi connected devices requiring mobile connections are : Tablets; Laptops; Readers (Kindles); cameras; Smart apparel (watches, glasses, bracelets – providing health sensors)





# Sophos 2013 Traveller Survey

## AVERAGE # OF DEVICES PER PERSON BY COUNTRY



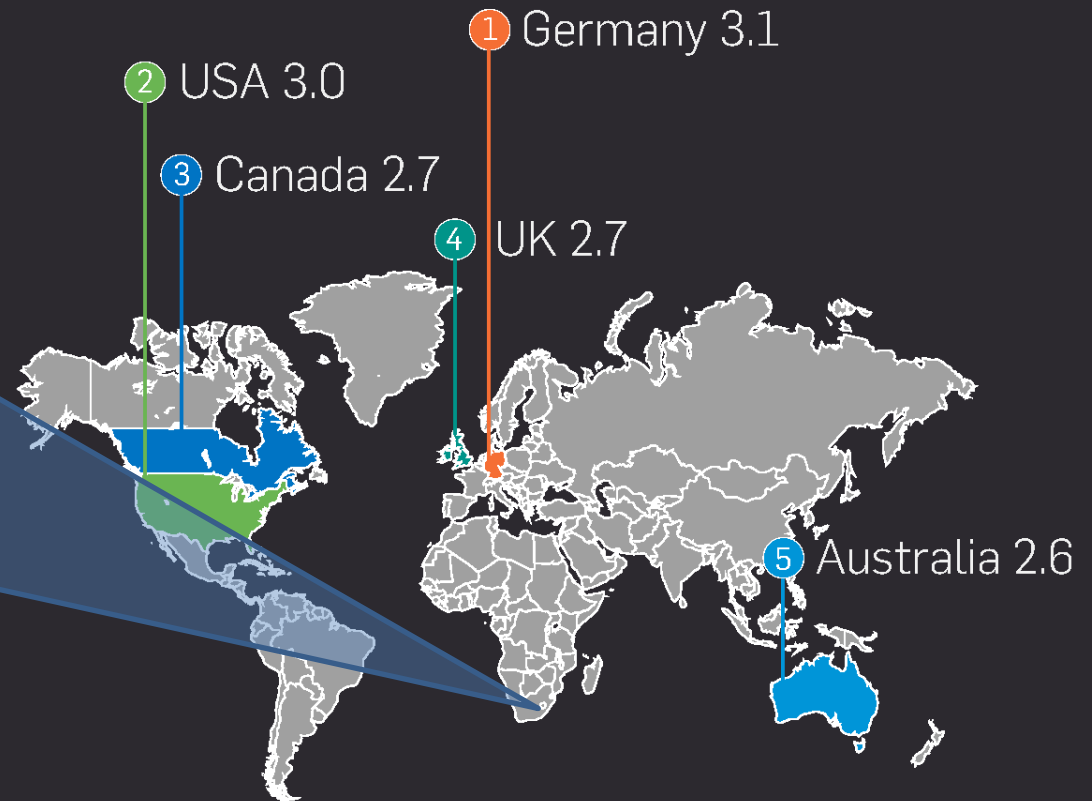
# What would it look like at Spiers, 2015?

We did the survey at iWeek. The result was an average of 2-3, max 5



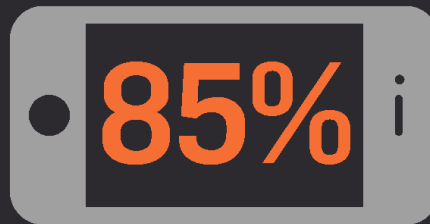
## Snap Survey

### AVERAGE # OF DEVICES PER PERSON BY COUNTRY



# HOW MANY DEVICES DO YOU CARRY?

THE AVERAGE PERSON  
CARRIES 2.9 DEVICES\*

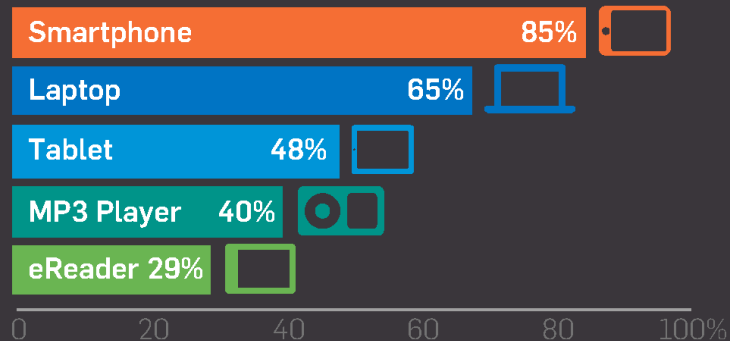


The smartphone is by far the most popular device carried...



...and the eReader is the least popular

## DEVICES BY POPULARITY



# Applications drive demand

## Video

(Youtube, Showmax, Netflix)

- Cisco VNI for SA predicts 6x the mobile traffic (2014 – 2020)
- Shift from SD -> HD -> UHD

## Cloud

Gmail, Facebook, Salesforce

Central to our lives

- Drives bandwidth, need for quality and responsiveness

Sony's Experia Z5  
Premium UHD  
smartphone



# Worldwide Hotspot Deployment

- Reached a total of 4,2-million hotspots in 2013
- To exceed 10,5-million by 2018
  - 1m hotspots will be deployed by Comcast alone
- i.e. forecast compounded annual growth rate of 15%

Source : Van der Groenendal, H. "Carrier WiFi and WiFi offload: a telecoms business opportunity?". 2014-05-12.  
At <http://www.ee.co.za/article/carrier-wifi-and-wifi-offload-a-telecoms-business-opportunity.html> [2014-06-30]  
White, P. "Comcast will build over 1 million commercial hotspots in US", Wi-Fi 360. 2014-07-28 .  
At <http://www.wi-fi360.com/comcast-will-build-1-million-commercial-hotspots-us/> [2014-07-29]





# Wi-Fi is winning the paradigm tussle

## 3GPP Paradigm

Operator selects network

Some Competition

Few players (SA = 4)

User pays per Mb

No uncapped data

One revenue model

Need scarce spectrum  
operate

Market share declining

Telecoms players

## 802.11 Paradigm

User can select network

Fierce Competition

Many Players (SA > 10)

Often free to user

Uncapped is common

Many monetisation models

Any player can access spectrum

Market share growing

Location or Brand players

**Battle  
for  
control**

**Current Shift of Locus**



# Commercial Wi-Fi fills the gaps between home and the office



public transport and buildings  
(taxis, buses, planes, trains)



shopping, restaurants  
hotels



public places  
and residential areas



stadia

Wi-Fi is fast,  
cheap (often  
free) and  
optimised for  
indoor

# Investment Models Proliferate – all requiring wider coverage (i.e. shared sites)

Model	Reason for Needing Wide Coverage
Pay per megabyte	Your customers must have convenient access and your coupons must be redeemable across an extensive network
Government sponsored	Your population coverage must be wide enough to have economic impact; your content programs must reach a wide audience
Analytics sponsored	You need comprehensive user information. It cannot have large holes
Content driven	You must have a wide audience, with control on the quality and pricing
Carrier hand-off (mobile operators)	You need to hand off in ALL high traffic areas

Competition within the same model or alternative models creates overlapping demand at certain key venues (airports, shopping centre, stadia etc)

# Never pay for mobile phone service again.

Free talk, text & data—the only thing you'll give up is your cell phone bill. **Now available on the Coolpad Arise™.**

**NO CONTRACTS, NO ADS, NO CATCH**

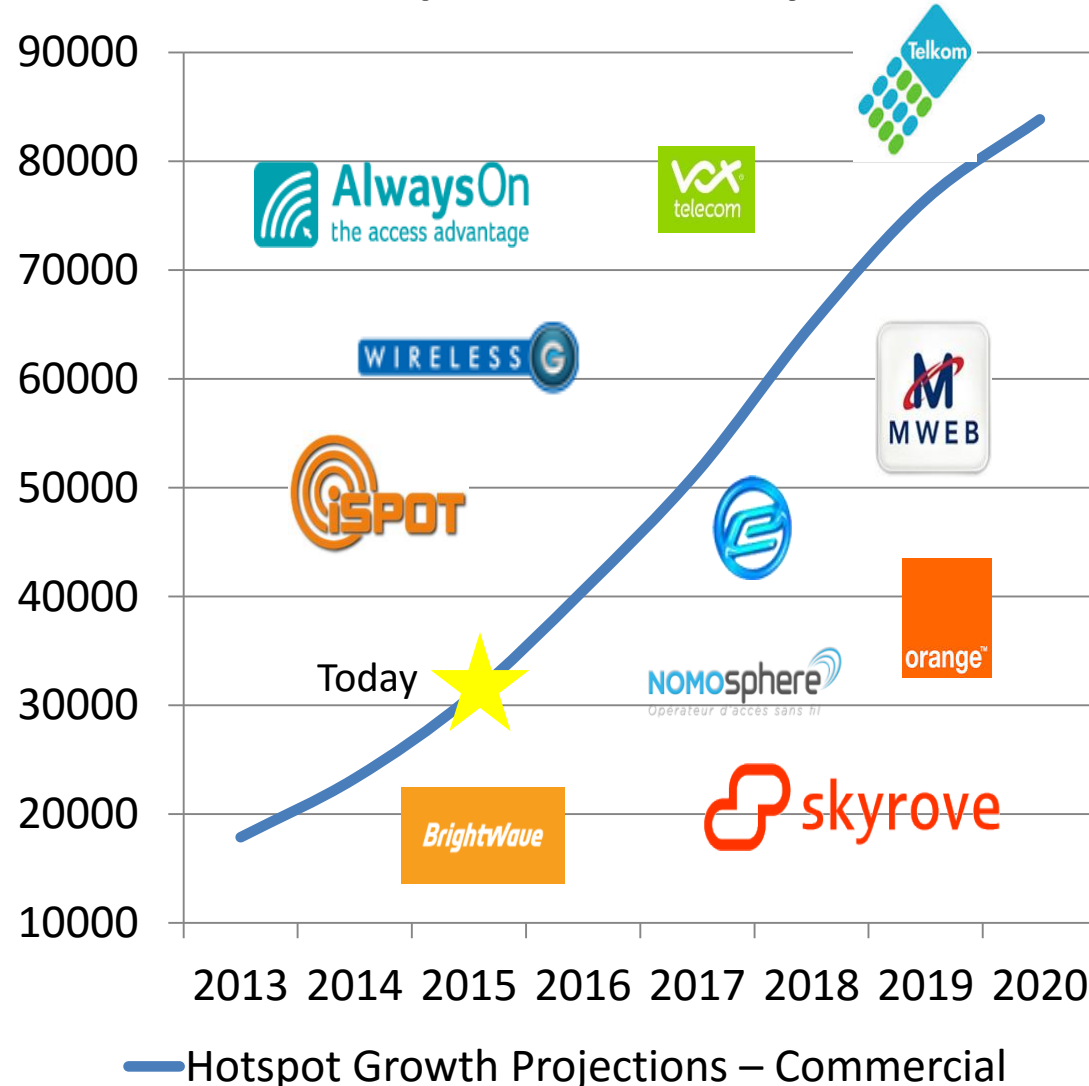


For example, Scratch Wireless in the US is a Wi-Fi based mobile service. Scratch doesn't charge for calls or data whilst on a Wi-Fi Network. You pay prepaid if you need mobile coverage



# SA has embarked on major hotspot investment

## Public Hotspot Growth Projections



- Deployment is across all categories of hotspot
- Sharing is essential, especially at high-traffic locations

Figures calculated by BMI-T. They include commercial and free public APs (access points)





# Marriage of two volatile characters

The “Kim”  
License Exempt Spectrum

Gained popularity through innovation *but can she maintain it*

Is there a **foundation of certainty** to build a solid future



The “Kanye”  
Property Monopoly

Has genuine underlying value

Does that warrant the vote for president?



# Can this mix work?



# License Exempt Spectrum

✓ Is the bedrock of innovation and competition

However ...

? a successful commercial hotspot has no ongoing certainty

X another party can sabotage the hotspot overnight by creating radio interference:

- in a wilful or malicious way
- through ignorance (poor implementation)



# Making License Exemption Behave

License Exemption

Self Regulation

Strong Oversight

## *Advantage*

Few barriers to entry – fosters innovation and competition

Manageable entry requirements

## *Disadvantage*

No certainty, esp w.r.t interference  
Smaller players can be bullied

Industry body can be hijacked

Barriers to entry  
Higher costs  
Industry hamstrung by regulator and policy indecision, resource constraints, political interference

## *Possibilities*

Lobby regulator to free up more spectrum and police the laws that do exist

Need an industry representative body with teeth of its own, with checks and balances to

Lobby for Regulator to improve execution of current framework

# A building as a 'quasi-monopoly'

- In Wi-Fi, a **venue** is a (potential) monopoly
- Just look at the literature – 'land grab' etc
- In voice interconnect – the regulator regards an operator's subscriber base as a monopoly.
  - The concept is similar for Wi-Fi locations
- A location could be regarded as an essential facility.
  - Facilities Leasing regulation is currently poorly implemented.
  - The imminent publishing of a Guideline should improve the situation.



# Landlords behave in many different ways

irritated

welcoming

Greedy \$\$\$

Cautious (conservative)

ignorant  
ignorant  
ignorant  
ignorant

irritated

eager

shrewd

complacent



# Playing Nicely in the Property Yard

First Come First Serve

Shared/Open Access

State Intervention

## *Advantage*

Reward initiative  
Property owners leverage their assets

Simplify management for owners  
Benefit of greater traffic  
Minimise duplication

Overcomes property-access barriers to good telecoms

## *Disadvantage*

Stifles Competition  
Creates holes in national networks

Related models not proven elsewhere (Kenya –LTE; Mexico)  
Risk of quasi-monopolistic behaviour

Operators can throw in technical and legal hurdles to delay execution

## *Possibilities*

Lobby and educate property owners  
Encourage mutual sharing agreements

The skill is in the drafting  
Develop workable local models which build transparency and trust

Lobby for Regulator to improve execution of current framework

# Hotspot nuances to Sharing/Open Access

- ? Investment models
- ? Land ownership
- ? Quality Standards
- ? Physical access
- ? Costs
  - Sharing Costs
  - Costs of Open Access Aps
  - False economy (closing out true investment)
- ? Technical Constraints

# Monopolistic Behaviour Must be Overcome

- The 'quality' argument (we can't work with you because you're not up to scratch)
  - "You aren't 'carrier grade'"
  - We can't trust your billing/security
- This is a fully wholesale network, but here are our non-negotiable Terms and Conditions
  - Here is the price
  - The service is best effort
  - We can't make changes to the configuration
  - We can't tell you why there was downtime

# Sharing Infrastructure Requires a Fresh Attitude

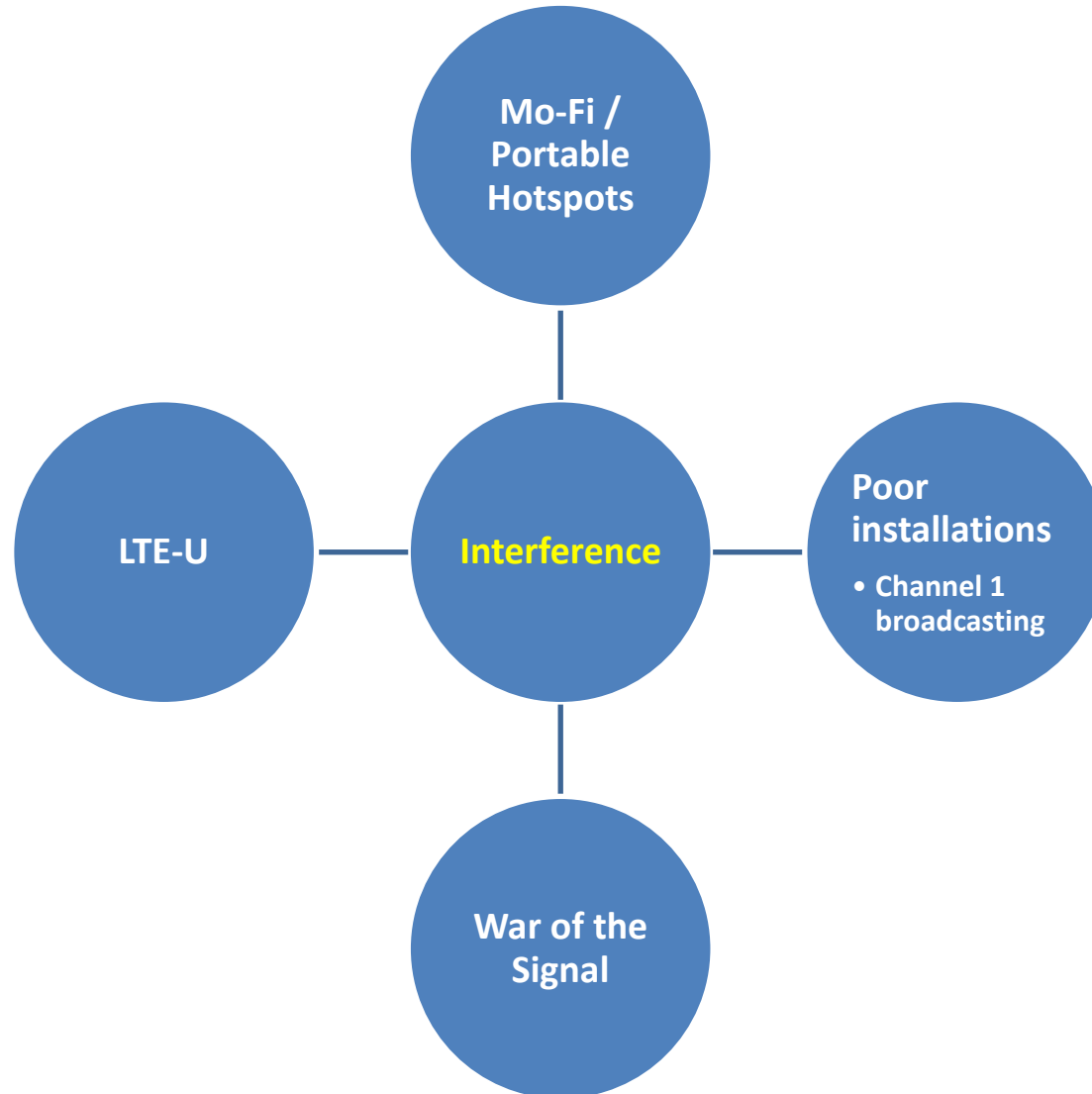
- ***Persevering*** with the collective process in pursuit of the common good
- ***Earning trust*** through transparency of pricing, technical plans and customer information management
- ***Developing confidence*** in the quality of service
  - Trust that a third part can deliver on SLAs on timing, quality, reliability and responsiveness
- ***Trust*** in security and customer data confidentiality



# Technical Issues - Aggregation

- An AP can broadcast multiple SSID's. But there is a significant cost to throughput.
  - Always On 'carrier' currently limits this to 4
  - With Hotspot 2.0, this limitation should fall away
- Open access networks are technically complex to implement
- **Brands** have competing requirements (SSID's, splash pages)
- Roaming is possible but complex
- RICA 'know your customer' requirements add further constraints.
- "Best Effort" dominates, vs the so-called "Carrier Grade" objective

# Technical Issues - Interference



# A Call to Action – the Marriage Must Work

A woman with dark hair in a ponytail and a man with a beard are shown from the chest up, wearing white shirts. They are looking at each other with serious expressions. The background is a light-colored wall.

Understand the  
Issues (and  
their  
significance )

Organise for  
change

- WAPA: enormous experience
- Wi-Fi Alliance: setting up to tackles these issues

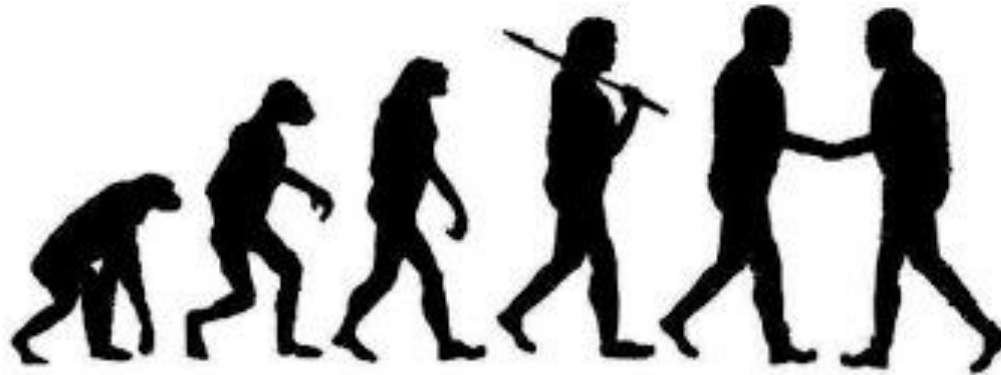
Clarify our  
position on  
hotspot sharing

- Take an industry and consumer perspective

Lobby and  
Educate

- Code of Good Practice for Landlords

# “Trusting we will evolve”



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