

Whitespace Spectrum

If you love something
set it free...

love-hz.com
@WeLoveHz

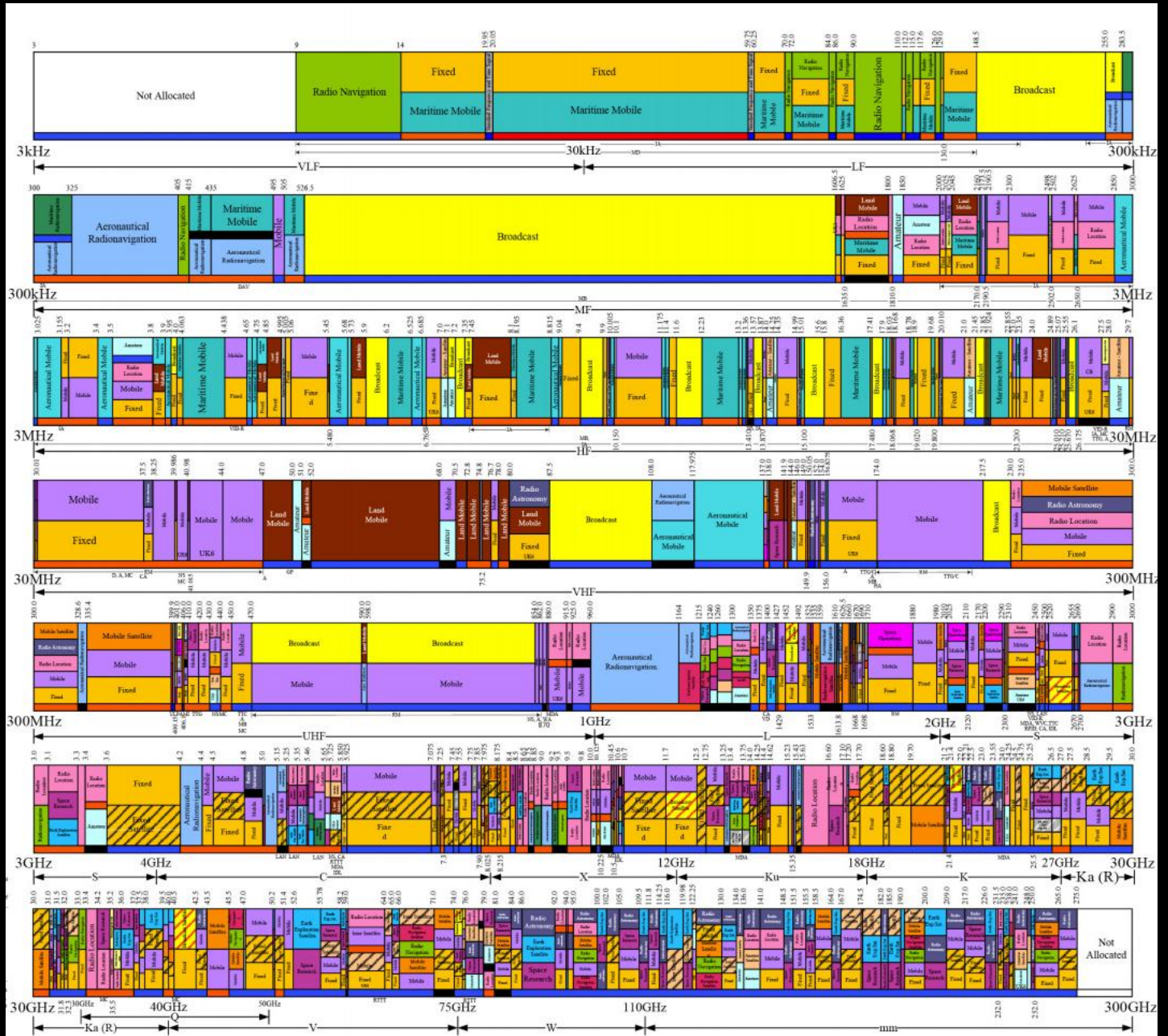








SPECTRUM

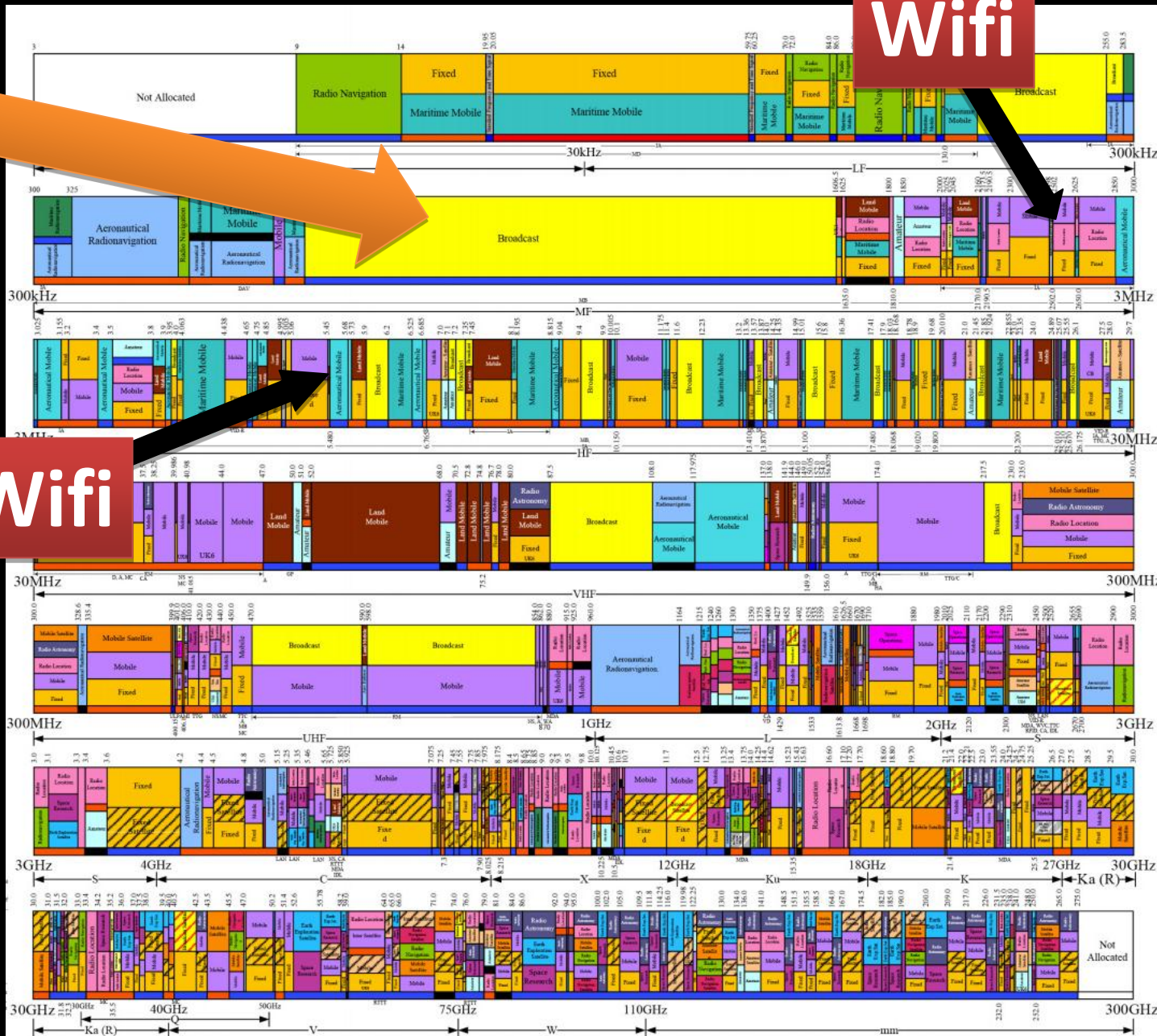


TV

SPECTRUM

Wifi

Wifi



TYPES OF LICENCE

Licensed

GSM, 3G, 4G, Microwave links

Light Licensed

5.8Ghz

Dynamic

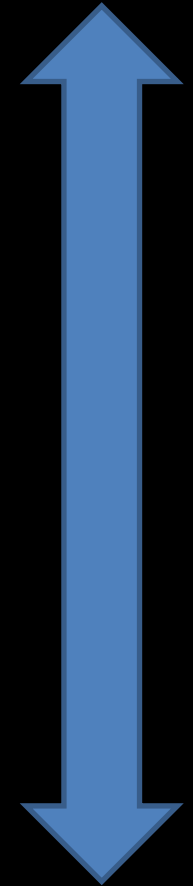
New!

TV Whitespace

Unlicensed

2.4GHz, 5.4GHz: Wifi, Bluetooth

Expensive &
Controlled



Cheap &
Available

“By 2008, devices operating in licence-exempt spectrum outsold those using licensed spectrum including the totality of televisions, radios and cellular phones.” (Thanki 2012)

WHAT WOULD VINT DO?

“I would never do another radio spectrum auction. Think of how much GDP growth was generated by open spectrum WiFi”

-- Vint Cerf

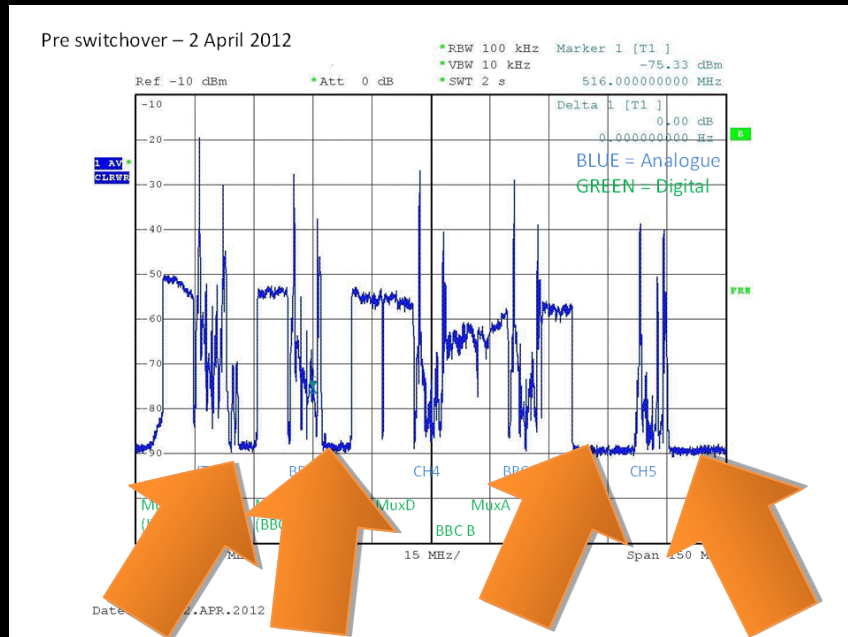


SHARE IT

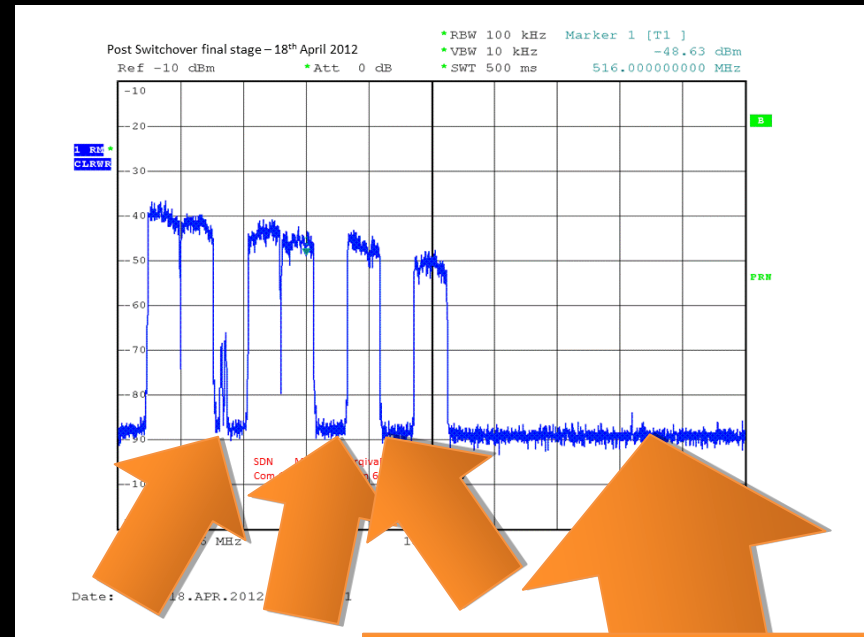


WHAT IS A TV WHITESPACE?

PRE-SWITCHOVER

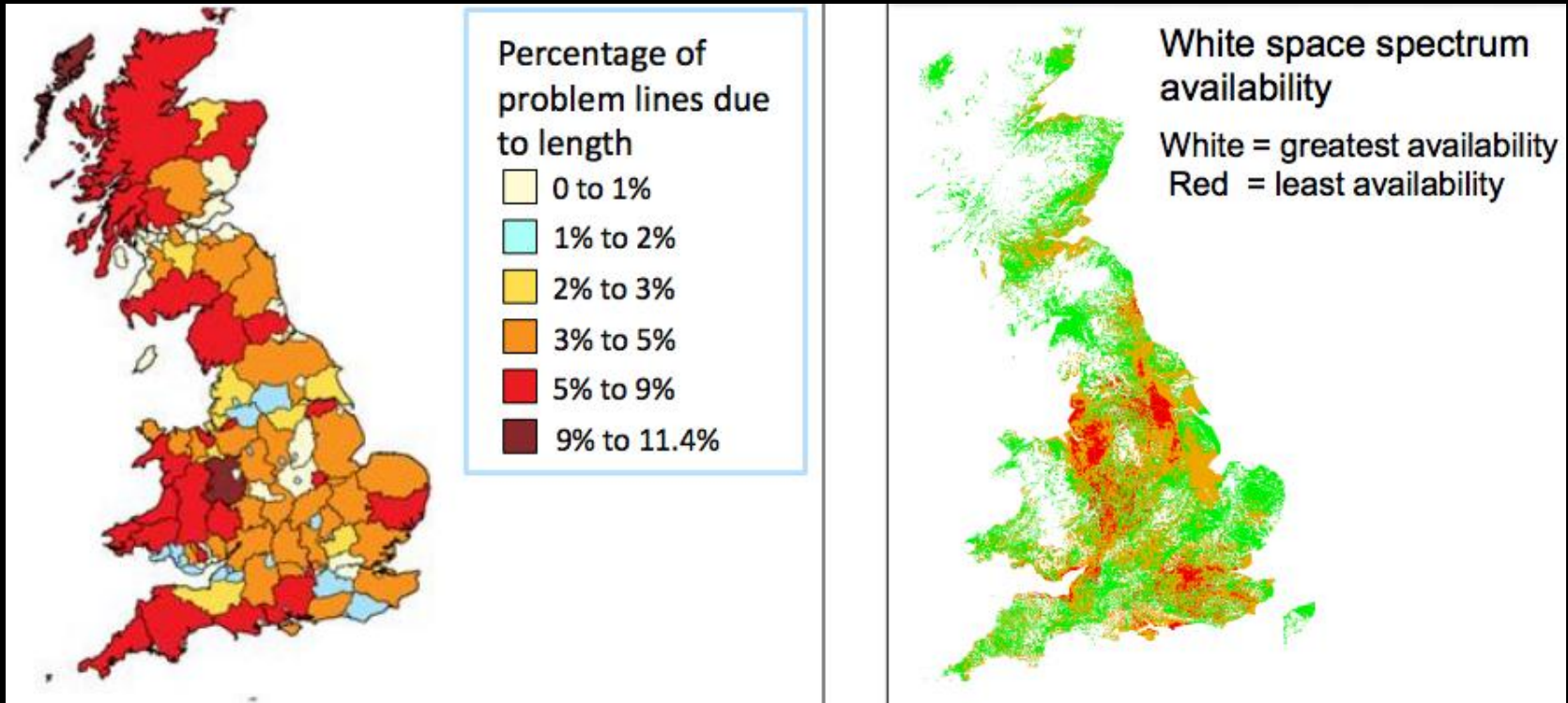


POST-SWITCHOVER



DIVIDEND!

WHERE ARE TV WHITESPACES?



WHITESPACE DATABASE



RANGE, BANDWIDTH, AVAILABILITY



Whitespace

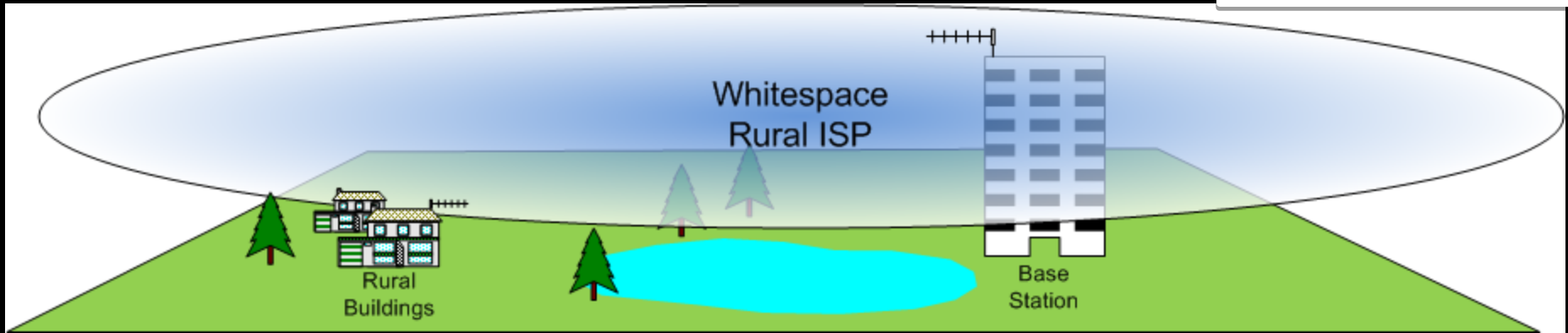
10km

16Mbps per channel

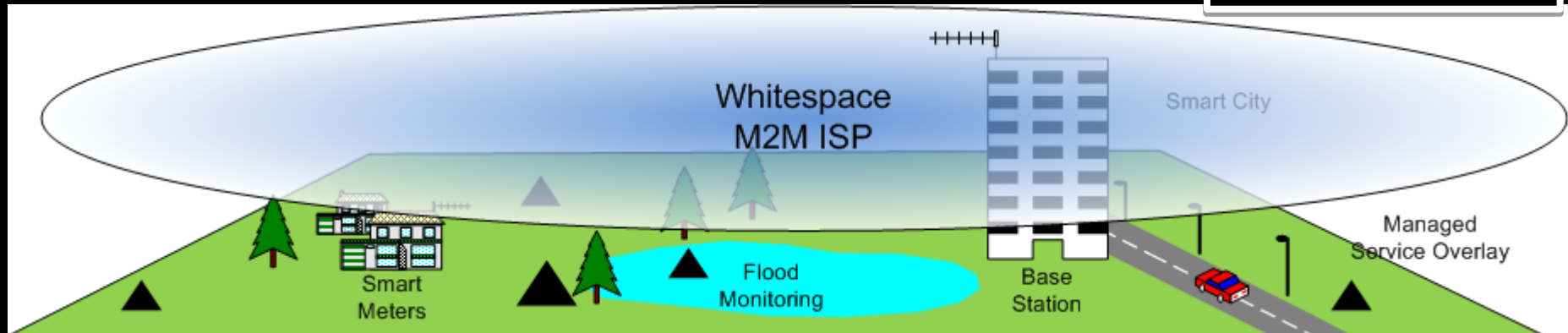
Sparsely Populated Areas

APPLICATIONS

RURAL BROADBAND



INTERNET OF THINGS



WHAT CAN YOU DO?



FIND A WHITESPACE NEAR YOU

<http://uk-whitespaces.spectrumbridge.com>

The screenshot displays the user interface of the UK Whitespaces website. At the top, there are four filter tabs: "Protected Areas" (with a downward arrow), "Channels" (with an upward arrow), "Device Types" (with a downward arrow), and "Map Type" (partially visible). Below these tabs is a map of the United Kingdom, with a red overlay indicating protected areas. A blue star is placed on the map near Cambridge. In the center of the map, a "Channels" selection table is overlaid. The table has two columns: "Select All" and "Unselect All". Below these columns is a grid of checkboxes for channels 21 through 60. Channel 22 is checked. At the bottom left of the map, there are two icons: "Identify" and "Measure".

Select All		Unselect All							
<input type="checkbox"/>	21	<input type="checkbox"/>	29	<input type="checkbox"/>	37	<input type="checkbox"/>	45	<input type="checkbox"/>	53
<input checked="" type="checkbox"/>	22	<input type="checkbox"/>	30	<input type="checkbox"/>	38	<input type="checkbox"/>	46	<input type="checkbox"/>	54
<input type="checkbox"/>	23	<input type="checkbox"/>	31	<input type="checkbox"/>	39	<input type="checkbox"/>	47	<input type="checkbox"/>	55
<input type="checkbox"/>	24	<input type="checkbox"/>	32	<input type="checkbox"/>	40	<input type="checkbox"/>	48	<input type="checkbox"/>	56
<input type="checkbox"/>	25	<input type="checkbox"/>	33	<input type="checkbox"/>	41	<input type="checkbox"/>	49	<input type="checkbox"/>	57
<input type="checkbox"/>	26	<input type="checkbox"/>	34	<input type="checkbox"/>	42	<input type="checkbox"/>	50	<input type="checkbox"/>	58
<input type="checkbox"/>	27	<input type="checkbox"/>	35	<input type="checkbox"/>	43	<input type="checkbox"/>	51	<input type="checkbox"/>	59
<input type="checkbox"/>	28	<input type="checkbox"/>	36	<input type="checkbox"/>	44	<input type="checkbox"/>	52	<input type="checkbox"/>	60

OCCUPY SPECTRUM

GUERRILLA SENSOR NETWORKS

COMMUNITY BROADBAND

INTERNET OF THINGS

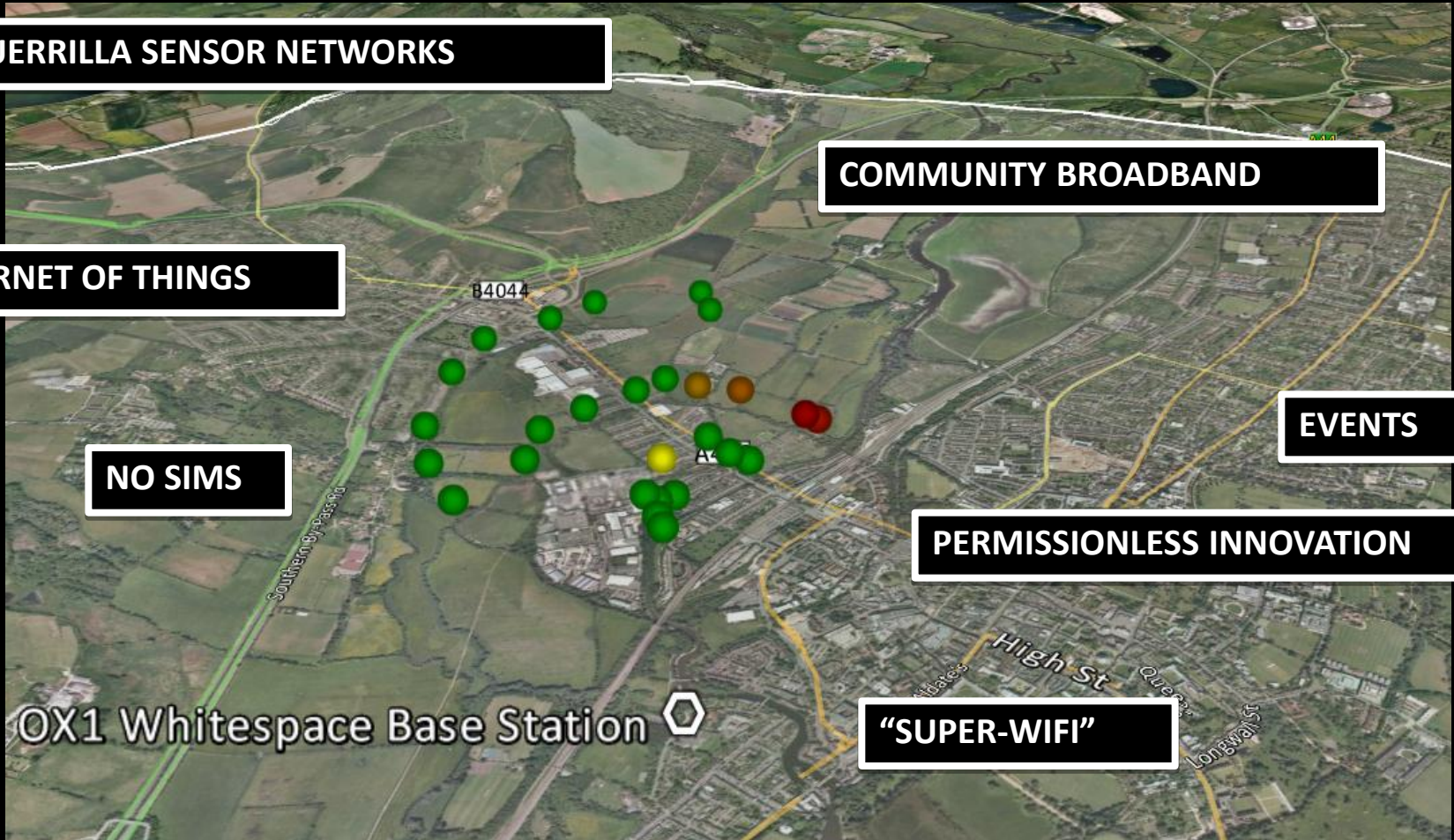
EVENTS

NO SIMS

PERMISSIONLESS INNOVATION

OX1 Whitespace Base Station

"SUPER-WIFI"



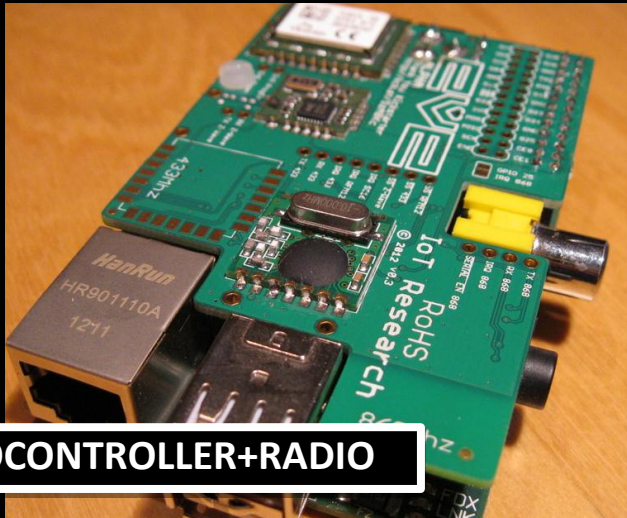
WHAT DO YOU NEED?

CPE



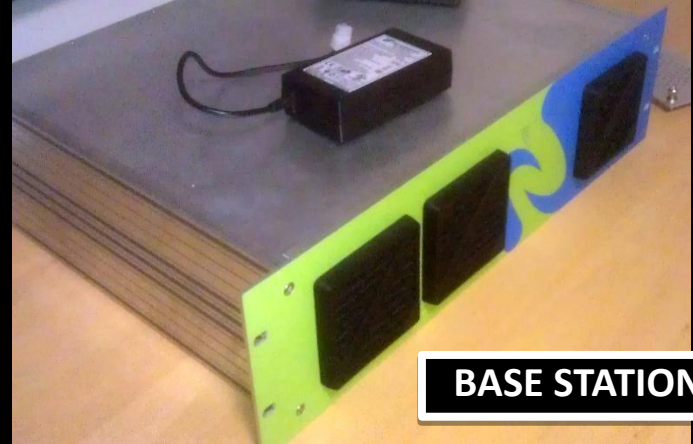
OR

MICROCONTROLLER+RADIO



+

BASE STATION



WHEN DO WE START?

Ben Ward

love-hz.com

@WeLoveHz



LOVE HZ