

G4S

Open Eir PSTN Switchover

What It Means For You



Introduction

- Welcome
- Changes to telephony Infrastructure in Ireland up to 2025
 - All businesses impacted
 - Including many Intruder, Fire Alarms and Intercoms that rely on legacy PSTN, ISDN or ADSL networks
- Leading industry experts here today to help guide you:
 - Through changes
 - On what it means for you and your customers

Agenda

- **Introduction & G4S Monitoring** - Paul Fitzgerald, G4S
- **What is happening, when and why?** - Michael Browne, Open Eir
- **What security systems will be impacted and why?** - John Coleman, CSL
- **What options exist?** - John Coleman, CSL
- **What should you be saying to end-users?** - Paul Fitzgerald, G4S
- **What Do You Do Next, & How Can G4S Help ?** - Paul Fitzgerald, G4S
- **Questions**

G4S Monitoring

24/7/365
Fully Accredited
Monitoring Center.



Our Service Offering :

- Intruder & Fire Alarm Monitoring
- Lone worker protection
- Access control management
- Outsourced control room
- Critical/emergency response services
- Vehicle tracking
- Remote CCTV & Analytics
- Temporary solutions
- Rapid Deployment CCTV Towers



Securing Your World



How it works

Personal Protection
(lone worker)



Home



Broadband / IP



Alarm Receiving Centre



Operator



Telephone Line
(Digi)



Vehicle



Business



GSM

G4S
MESH



Emergency
Services



G4S Response
Or Keyholder

Securing Your World



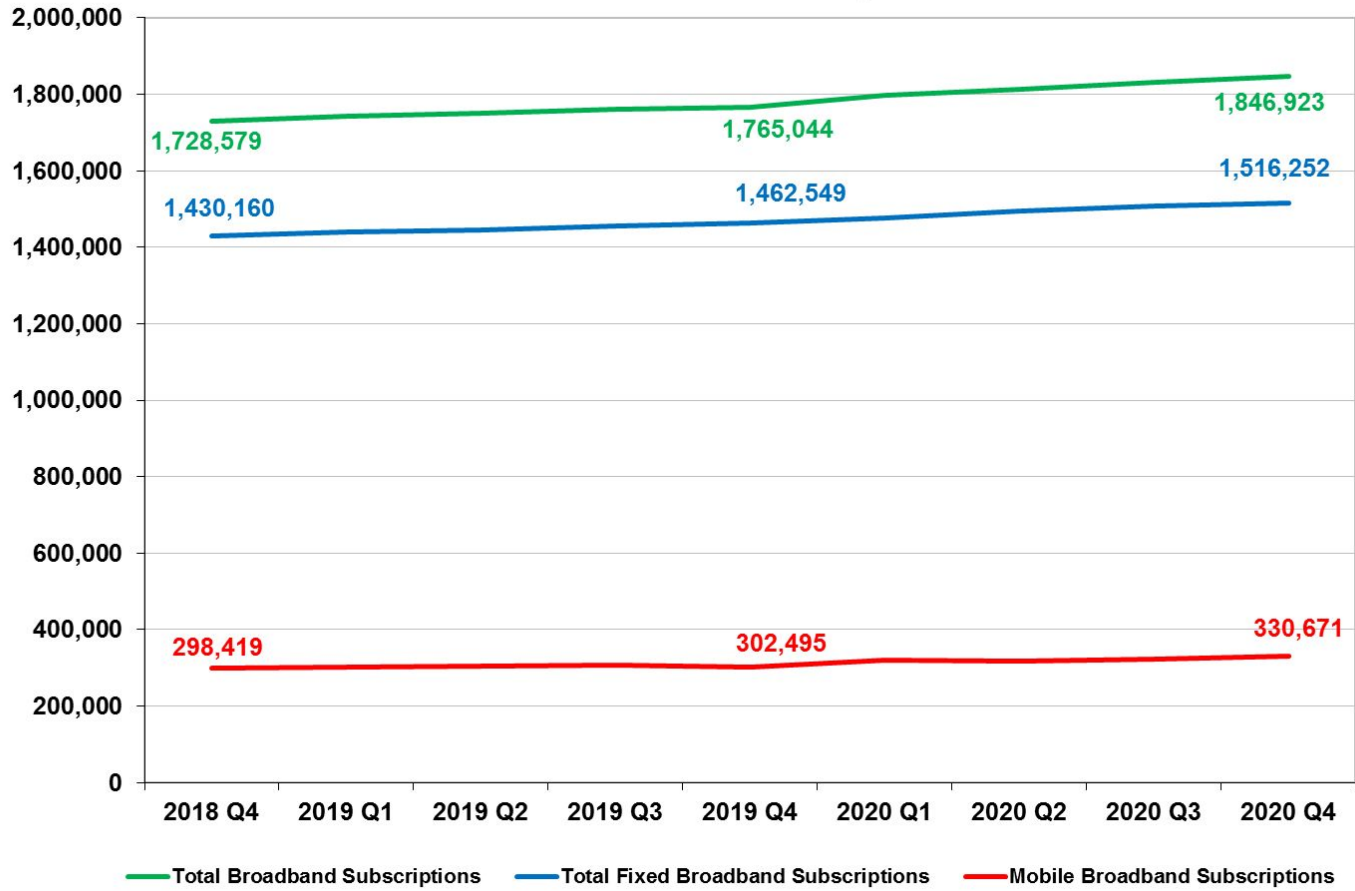
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Open eir Fixed Line Evolution



Total Broadband Subscriptions

Active Subscriptions

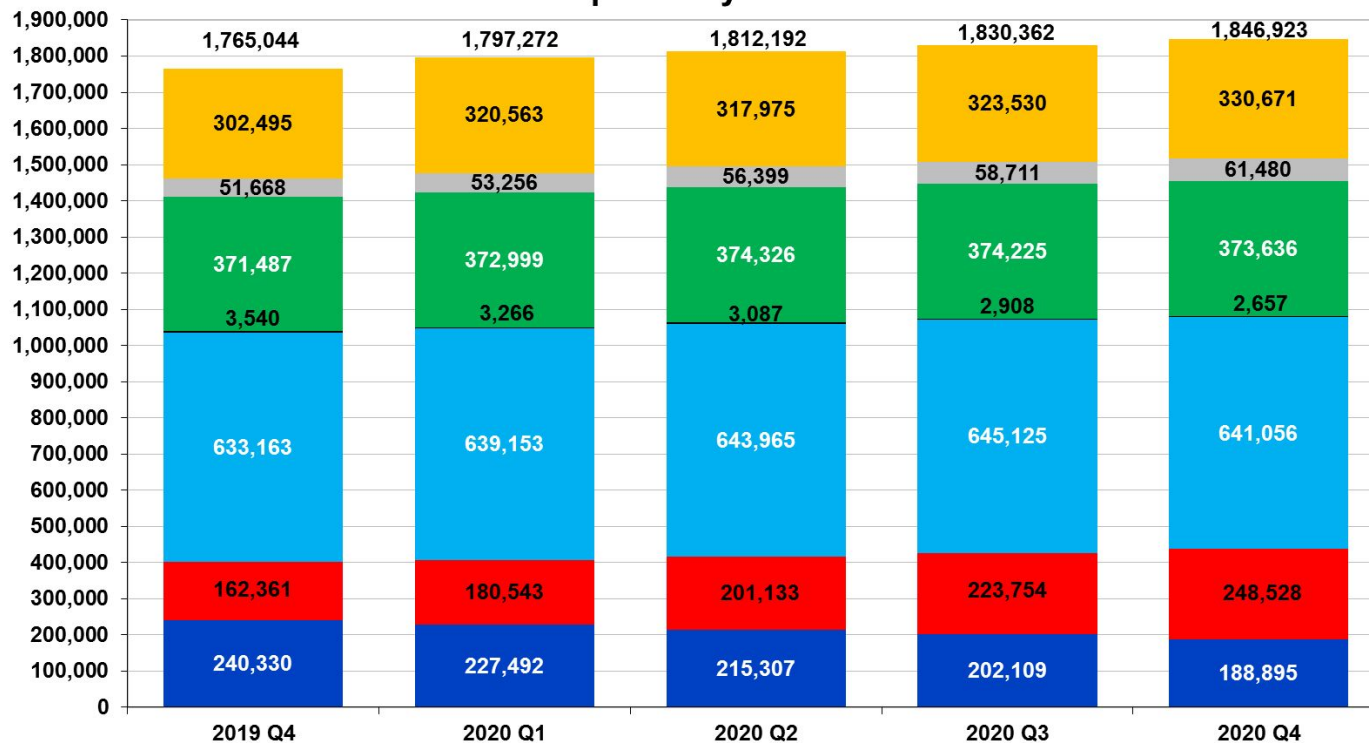


Continued growth in both mobile and fixed broadband subscriptions

Source: Quarterly Key Data Questionnaire

Broadband Subscriptions By Platform

Number of Subscriptions



Source: Quarterly Key Data Questionnaire

■ DSL Broadband Subscriptions ■ FTTP Broadband Subscriptions ■ VDSL Broadband Subscriptions ■ Satellite Broadband Subscriptions
 ■ Cable Broadband Subscriptions ■ FWA Broadband Subscriptions ■ Mobile Broadband Subscriptions

Decline in

- Satellite
- DSL

Increase in

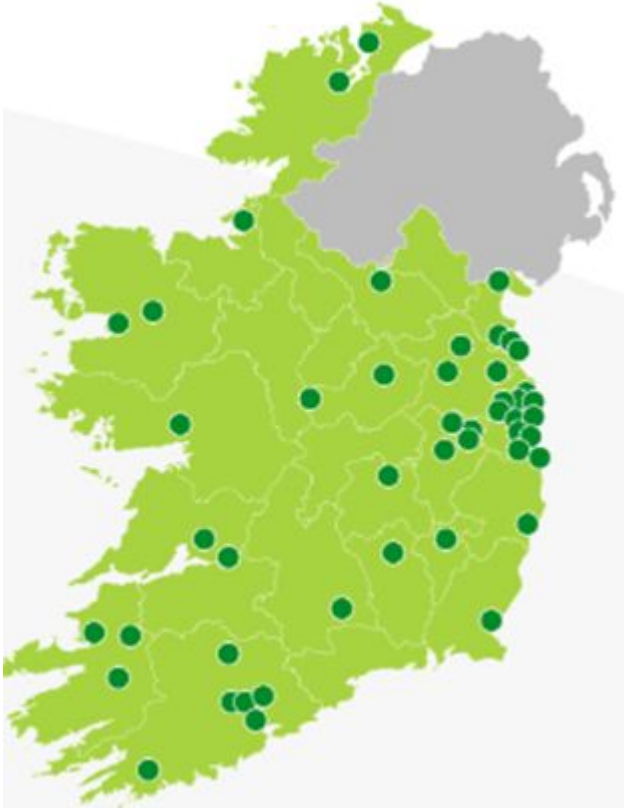
- VDSL
- FTTP
- FWA
- Mobile
- Cable

Virgin Media

| Virgin Media | Homes Passed | Fixed Line Customer Relationships | Total RGUs | Internet Subscribers | Video Subscribers | Telephony Subscribers | Mobile Subscribers |
|----------------------|--------------|-----------------------------------|------------|----------------------|-------------------|-----------------------|--------------------|
| 31/03/2006 | 895,100 | 592,600 | 624,100 | 32,700 | 591,100 | 300 | |
| 31/03/2011 | 871,000 | 534,900 | 811,700 | 214,900 | 487,900 | 108,900 | |
| 31/12/2020 | 946,500 | 435,200 | 992,500 | 383,000 | 309,500 | 300,000 | 119,600 |
| Variance last qtr | 2,500 | - 1,400 | - 4,300 | 100 | 5,600 | - 10,000 | 4,400 |
| Variance last year | 11,500 | - 200 | - 1,200 | 4,800 | 29,100 | - 35,100 | 22,000 |
| Variance last decade | 75,500 | - 99,700 | 180,800 | 168,100 | - 178,400 | 191,100 | 119,600 |
| Variance last 15 yrs | 51,400 | - 157,400 | 368,400 | 350,300 | - 281,600 | 299,700 | 119,600 |

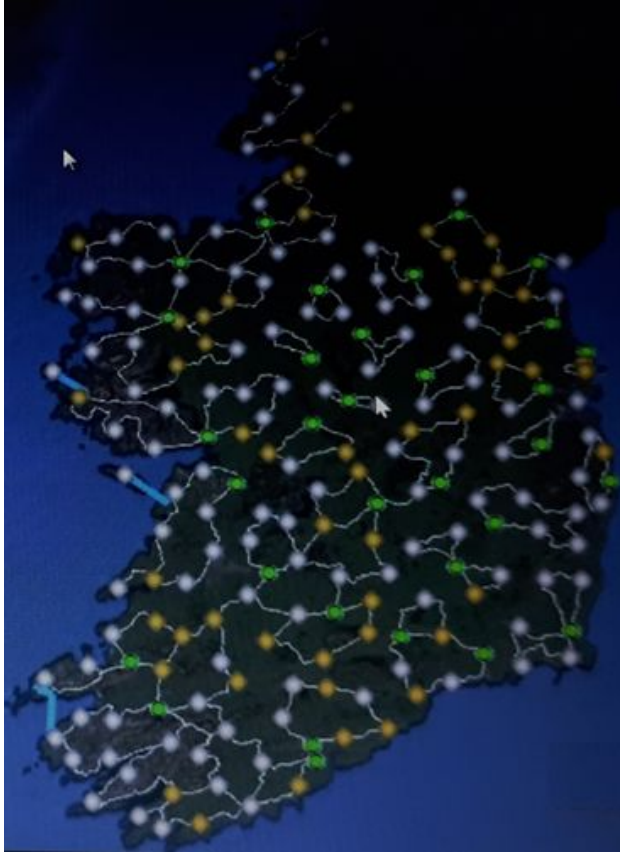
Unlike most incumbents, eir has only a minority stake (<30%) in the urban broadband, significantly behind Virgin's cable network's (>60%), market share in Dublin.

SIRO FttH



- Joint venture ESB & Vodafone
- Uses ESB infrastructure
- 320k homes passed (Jan 2021)
- Plan to pass 430k by mid 2022
- 80k FttH customer (Jan 2021)

NBI FttH



Government funded broadband network
to non commercial areas

Covering 546,000 premises, and any
new builds over the next 25 years

201,011 Premises Surveyed

36 Schools Connected

1k homes passed (24/3/21 Minister
Ryan)

70k homes to be passed by end of 2021

Open eir FttH

- The network currently passes 749,000 homes.
- The aim is to extend this to 1.7 million over the next three years.
- The rollout is rapid, passing roughly 70,000 premises a quarter.
- The focus for Eir is now firmly on recapturing lost ground from Virgin, particularly in urban areas





Network Modernisation

Introduction

- eir's PSTN network is old – equipment dates from 1980 to 2000 - hard to maintain
- The equipment E10 (Alcatel) and AXE (Ericsson) is end of life
- Skills and experience required are becoming increasingly scarce
- We are modernising eir's PSTN network using Nokia's MSAN technology
 - MSAN: Multi Service Access Node
 - Flat hierarchy, IP based

Nokia Solution

- Nokia MSANs



7302 FD-16



Large - Up to 18 LT slots
1,296 POTS ports,
3 shelves per rack,
(300 x 600mm footprint)

7330 FD-8



Medium Up to 10 LT slots
720 POTS ports

7356 FD-2



Small 2 LT slots
144 POTS
ports

The diagram illustrates the evolution of network architecture for VoIP/TV services, showing the transition from traditional TDM services to IP services.

Legend:

- TDM Service (Red dotted line)
- IP Service (Blue dashed line)

Architecture Components and Flow:

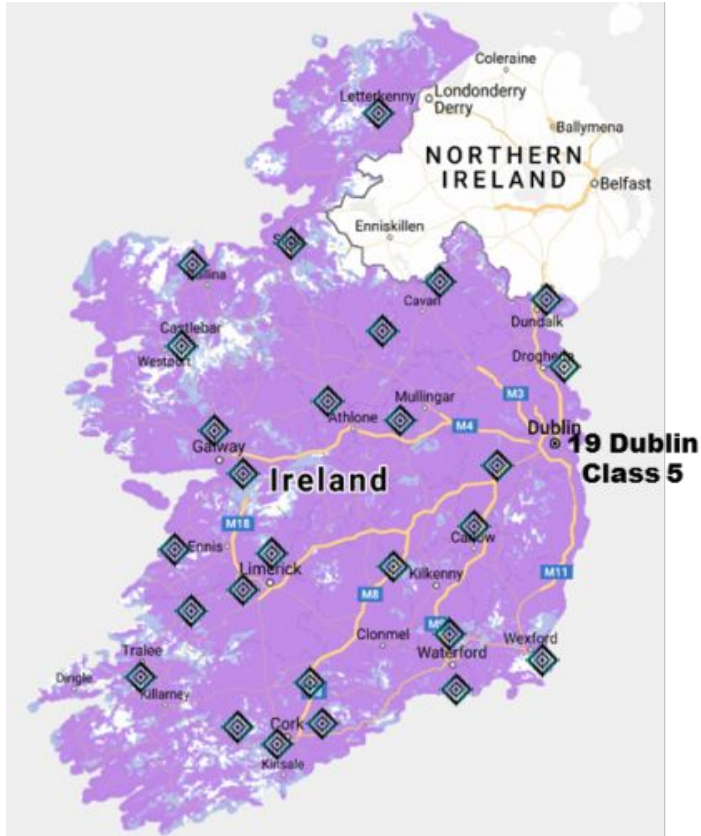
- Residential Premises:** Contains a house icon, a red triangle, and a box labeled "Internet & TV" and "Voice". It includes an RGW (Residential Gateway) connected to the Internet & TV box via broadband, and a Filter connected to the Voice box via narrowband.
- Cabinets:** Contains a DSLAM (Digital Subscriber Line Access Multiplexer) and a Filter. It is connected to the Residential Premises via copper (narrowband) and to the Exchange via fibre (broadband).
- Exchange:** Contains an IP Node and an MSAN (Multi-Service Access Node). It is connected to the Cabinets via fibre (broadband) and to the IP Network via IP Node.
- IP Network:** A cloud representing the IP network, connected to the Exchange via IP Node and to the MSAN Control via IP Service.
- MSAN Control:** A control unit connected to the IP Network.
- Legacy Network:** A cloud labeled "RSTN" (Residual Service Network) and "PSTN" (Public Switched Telephone Network) is shown with a large red 'X' over it, indicating it is being phased out.

Service Flow:

- TDM Service (Red dotted line):** Flows from the Residential Premises (Voice) through the Filter, DSLAM, and Filter in the Cabinets, then through the MSAN in the Exchange, and finally through the RSTN/PSTN cloud.
- IP Service (Blue dashed line):** Flows from the Residential Premises (Internet & TV) through the RGW, then through the Filter, DSLAM, and Filter in the Cabinets, then through the IP Node in the Exchange, and finally through the IP Network to the MSAN Control.

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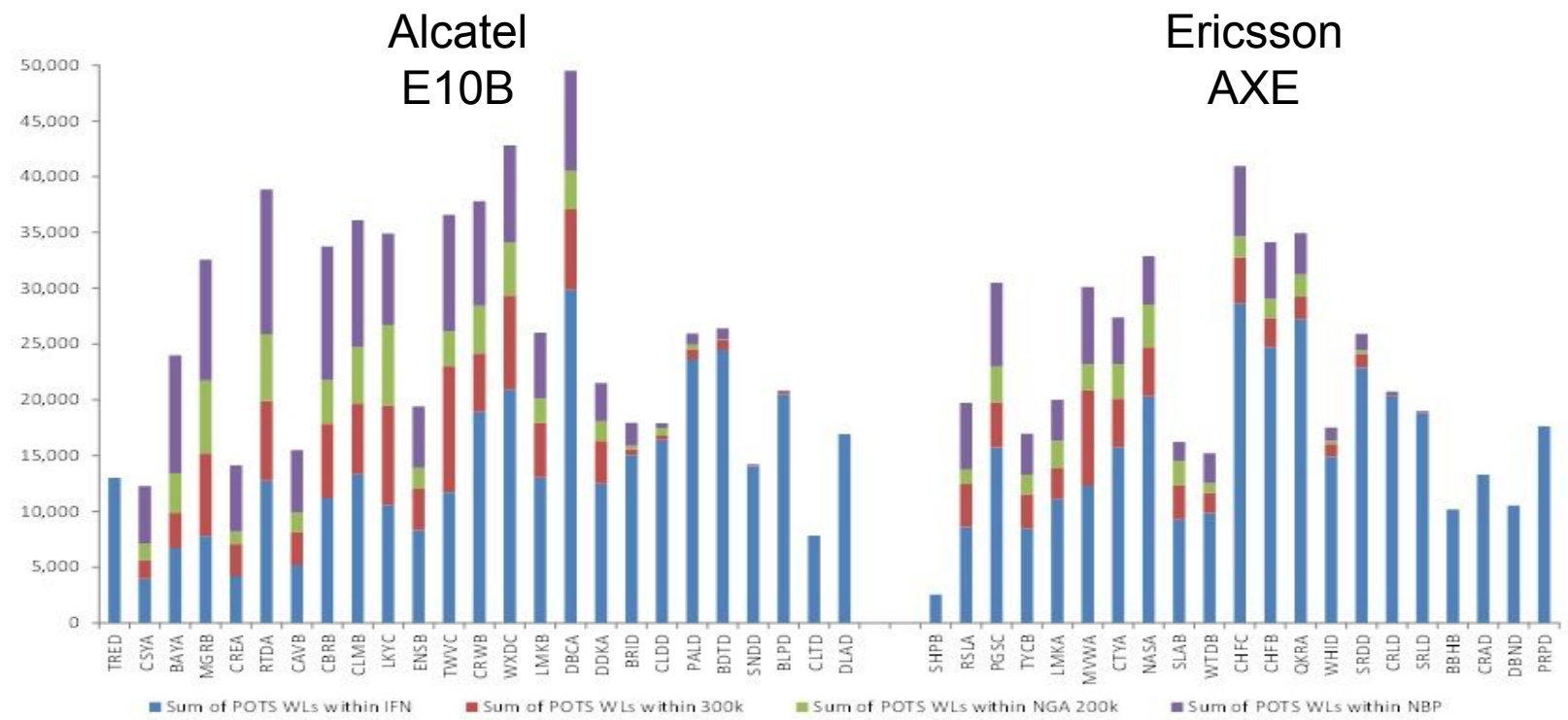
PSTN Network Today



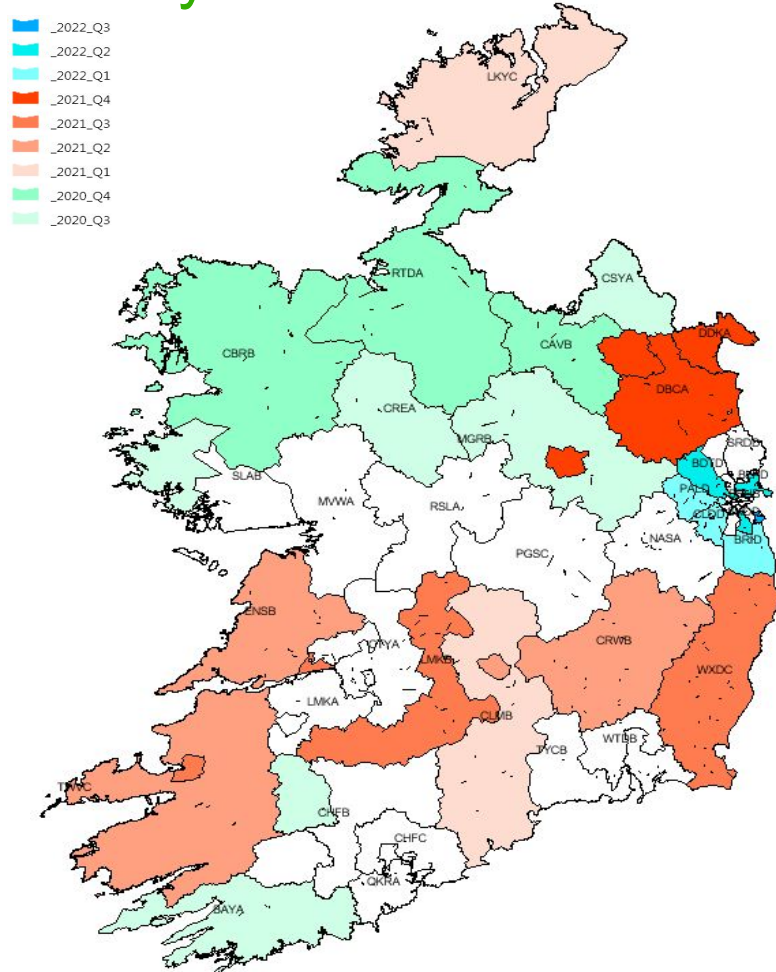
- 46 main switch sites (Alcatel (E10) & Ericsson (AXE))
- Approximately 1,200 exchanges
- Many small exchanges:
 - 90% have <2,500 working lines
- Underlying transmission consists of
 - >20k E1 links
 - built on PDH & SDH technology
 - also ageing

Rollout by Core Switch, Alcatel core switches to be migrated first

Terenure , Castleblaney and Bantry core switch changed over

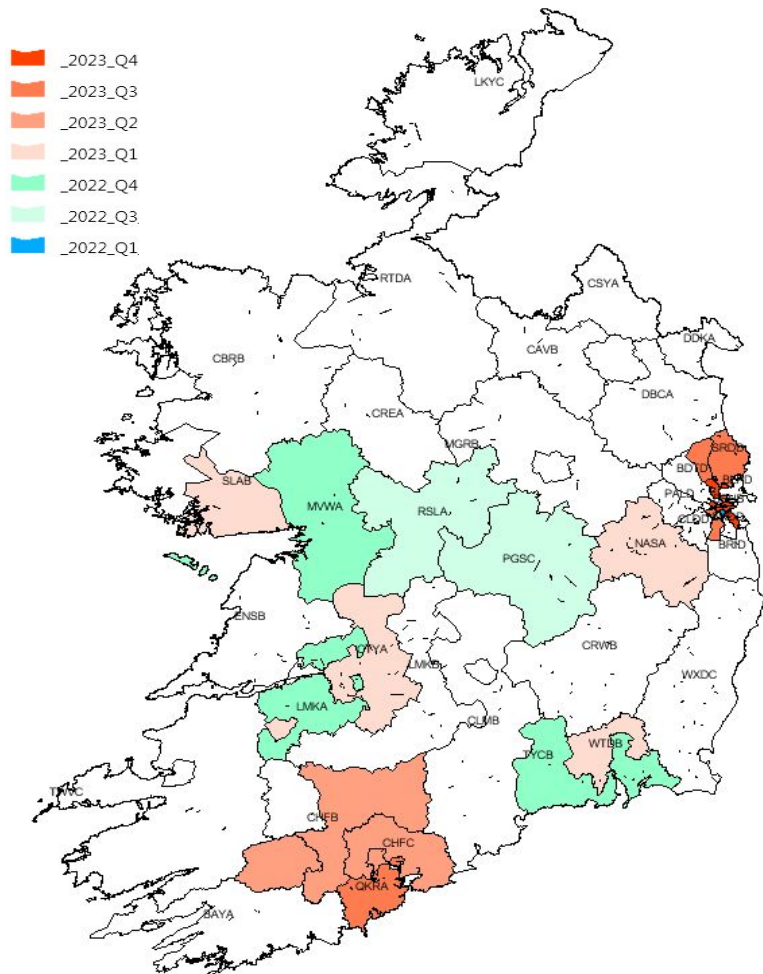


Rollout by Alcatel E10B Switches



| Rollout Order | Switch name | Calendar Year | Calendar Quarter |
|---------------|---------------------|---------------|------------------|
| 1 | TERENURE E10B | 2020 | Q3 |
| 2 | CASTLEBLAYNEY E10B | 2020 | Q3 |
| 3 | BANTRY E10B | 2020 | Q3 |
| 4 | MULLINGAR E10B | 2020 | Q3 |
| 5 | CASTLEREA E10B | 2020 | Q3 |
| 6 | RATHEDMOND E10B | 2020 | Q4 |
| 7 | CAVAN E10B | 2020 | Q4 |
| 8 | CASTLEBAR E10B | 2020 | Q4 |
| 9 | CLONMEL E10B | 2021 | Q1 |
| 10 | LETTERKENNY E10B | 2021 | Q1 |
| 11 | ENNIS E10B | 2021 | Q2 |
| 12 | TRALEE E10B | 2021 | Q2 |
| 13 | CARLOW E10B | 2021 | Q2 |
| 14 | WEXFORD E10B | 2021 | Q3 |
| 15 | LIMERICK E10B | 2021 | Q3 |
| 16 | DROGHEDA E10B | 2021 | Q4 |
| 17 | DUNDALK E10B | 2021 | Q4 |
| 18 | BRAY E10B | 2022 | Q1 |
| 19 | CLONDALKIN E10B | 2022 | Q1 |
| 20 | PALMERSTOWN E10B | 2022 | Q1 |
| 21 | BLANCHARDSTOWN E10B | 2022 | Q2 |
| 22 | SANDYFORD E10B | 2022 | Q2 |
| 23 | BELCAMP E10B | 2022 | Q2 |
| 24 | CLONTARF E10B | 2022 | Q2 |
| 25 | DUNLAOIRE E10B | 2022 | Q3 |

Rollout by Ericsson AXE Switch



| Rollout Order | Switch name | Calendar Year | Calendar Quarter |
|---------------|-------------------|---------------|------------------|
| 26 | SHIP STREET AXE | 2022 | Q1 |
| 27 | ROSLEVIN AXE | 2022 | Q3 |
| 28 | PORTLAOISE AXE | 2022 | Q3 |
| 29 | TYCOR AXE | 2022 | Q4 |
| 30 | LIMERICK AXE | 2022 | Q4 |
| 31 | MERVUE AXE | 2022 | Q4 |
| 32 | CASTLETROY AXE | 2023 | Q1 |
| 33 | NAAS AXE | 2023 | Q1 |
| 34 | SHANTALLA AXE | 2023 | Q1 |
| 35 | WATERFORD AXE | 2023 | Q1 |
| 36 | CHURCHFIELD AXE 2 | 2023 | Q2 |
| 37 | CHURCHFIELD AXE 1 | 2023 | Q2 |
| 38 | QUAKER ROAD AXE | 2023 | Q3 |
| 39 | WHITEHALL AXE | 2023 | Q3 |
| 40 | SWORDS AXE | 2023 | Q3 |
| 41 | CRUMLIN AXE | 2023 | Q3 |
| 42 | SUMMERHILL AXE | 2023 | Q4 |
| 43 | BEGGARS BUSH AXE | 2023 | Q4 |
| 44 | CROWN ALLEY AXE | 2023 | Q4 |
| 45 | DOLPHINS BARN AXE | 2023 | Q4 |
| 46 | PRIORY PARK AXE | 2023 | Q4 |

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Copper Switch Off



Copper Switch Off – a proposed transition

Stage 1: Consumer led migration

- Copper 'stop sell' progressively applied as premises are passed with fibre
- Customers wishing to stay on copper remain free to do so
- Backwards migration will not be possible
- Communication to consumers / business: information on benefits of FTTH, stop sell and timelines
- Communication to industry: information on inability criteria to order new copper services & to make changes to those in situ

Copper Switch Off – a proposed transition

Stage 2: Incentivising exchange area led migration

- Initiated when 75% of all premises within an exchange are passed with fibre
- Wholesale copper price increased to entry level FTTH
- Wholesale FTTC prices remain at open eir voluntary commitment levels
- Communication to all customers: Renewed information on availability of fibre
- Communication to industry: Notice of any price change provided 6 months in advance

Copper Switch Off – a proposed transition

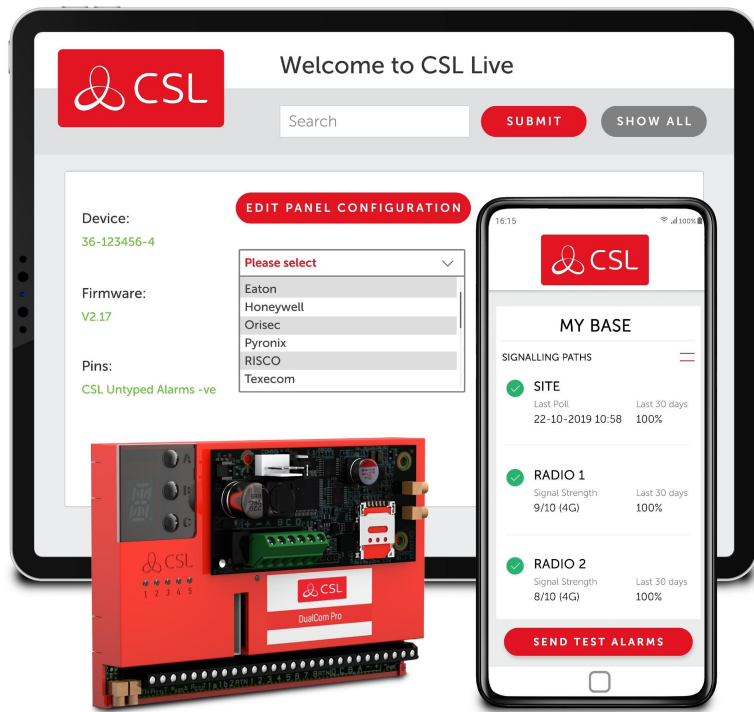
Stage 3: Completing the transition and copper switch-off

- Initiated when 95% of all premises within an exchange are passed with fibre. Regulated copper access remedies lifted
- open eir commit to offer a min of 30Mbps within 3 years for remaining 5%, where there is no alternative provider offering Gb fibre
- Communication to industry: Notice of withdrawal provided 12 months in advance
- Consideration to the needs of vulnerable users and for special cases.
- Plans are dependent on the consent of the Regulator and open eir will remain fully compliant with our regulatory obligations.

Challenges and Opportunities

- All homes will be able to get high speed broadband
- Presentation Ethernet and possibly a different location
- Device connections Ethernet or Wi-Fi
- Greater data transfer capability
- Integration with CCTV, security gates and home heating
 - Smart home
- Alarm panel upgrades
- Backup power for modems and ONTs
- Corporate services for residential premises

WELCOME



JOHN COLEMAN

HEAD OF SALES UK & IRELAND

NEXT GENERATION ACCESS



Open Eir is sharing its plans to move to Next Generation Access and PSTN emulation in 2024/5



Test Lab Oct 2020
Trials Terenure Nov/Dec 2020
Migrations Commence Mar 2021
Close PSTN Network over 4 or 5 years



Sky and Vodafone
To announce plans



Providing combined BB and emulated
PSTN service



Supportive of switch to NGA

Open Eir NGA service launched

Open Eir close PSTN network

2020

2021

2022

2023

2024

2025

Migration:

Consumer Led

Incentivised phase

Completing transition and Copper Switch
Off

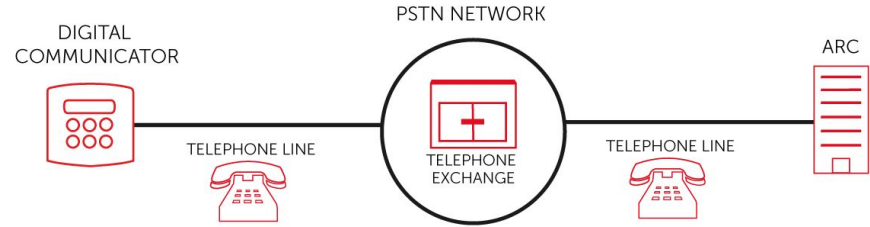
Trials:

Terenure, Dublin

DIGITAL COMMUNICATORS – THE INDUSTRY CHALLENGE



- THEY HAVE BEEN AROUND FOR DECADES
- LOW ANNUAL COST FROM ARC
- IF LEFT, MANY THOUSANDS OF DIGIS WILL 'DIE ON THE WALL'
- SINGLE PATH DEVICES USING PSTN HAVE NO BACK-UP AND REQUIRE URGENT UPGRADES
- INSTALLERS ASKING FOR 'UPSELL FEATURES' WHILST KEEPING COSTS LOW



DIGIAIR PRO – SINGLE PATH



High speed and flexible single path signalling solution for low risk home and small businesses.



- 2 ROAMING SIMS AS STANDARD – SUPER RESILIENT
- SERIAL CONNECTIVITY FOR ALARM SIGNALLING
- HKC SERIAL CONNECTIVITY FOR ALARMS
- INTRUDER & FIRE
- SUPER FAST INSTALL

SP2 Compliant

Single Path

4G SIMs

Ideal for digi
upgrades

DigiAir LAN

For sites with
limited mobile
coverage

HKC serial Connectivity
for alarm signalling

GRADESHIFT PRO – DUAL PATH



Revolutionary and reliable dual path signalling solution for medium or high risk properties



- DUAL 4G MODULES WITH DUAL ROAMING SIMS
- IP/4G OPTION AVAILABLE IF NEEDED
- SERIAL CONNECTIVITY FOR ALARM SIGNALLING
- HKC SERIAL CONNECTIVITY FOR ALARMS
- ZERO SINGLE PATH LINE FAULTS
- SUPER FAST INSTALL

DP2-4 Compliant
Dual Path

3 Roaming 4G SIMs
Each SIM uses a totally
separate roaming
platform

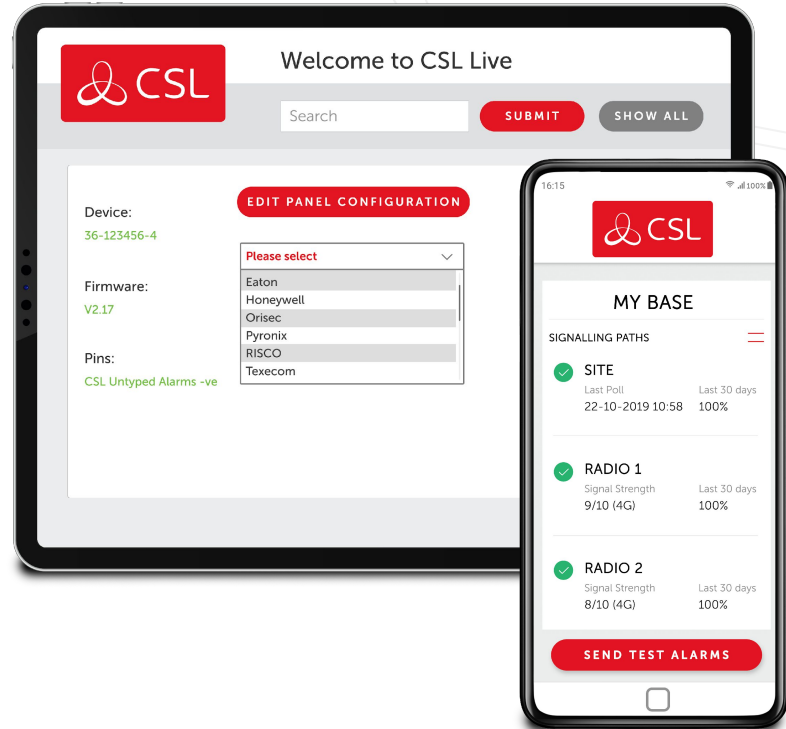
Smart Reporting
No single path fails sent
to the ARC

HKC serial
Connectivity for
alarm signalling

CSL LIVE & MY BASE APP



- MY BASE PLATFORM TO MANAGE DEVICES
- APP OR WEB BROWSER
- SEE SITES WITH SERIAL CONNECTIVITY
- PROGRAMME UNITS
- SEND TEST CALLS
- SEE AVAILABILITY TRENDS
- VISIBILITY OF ALARM SIGNALS
- LIVE INFO AT THE TOUCH OF A BUTTON





FEATURES & BENEFITS



- HOURLY POLLING – 5 HOUR POLL FAIL TIME
- 15 MINUTES TO INSTALL – DISCONNECT PHONE LINE, CONNECT MINIAIR AND TEST ALARM SIGNALS
- NO PANEL PROGRAMMING REQUIRED
- END USER AND ENGINEER APP – NO ADDITIONAL CHARGES FOR APPS
- ADD VALUE TO END USER TO RETAIN ARC CONNECTIONS



INSTALLER & END-USER APPS



INSTALLER VERSION

The MiniAir App

- ✓ MANAGE END USERS
- ✓ VIEW SIGNAL STRENGTH
- ✓ CHANGE INPUTS
- ✓ VIEW VOLTAGE
- ✓ VIEW EVENT LOGS



END-USER VERSION

The My Home Alarm App

- ✓ REMOTE ARM/DISARM
- ✓ RECEIVE PUSH NOTIFICATIONS
- ✓ UNLIMITED USERS
- ✓ VIEW EVENT LOGS
- ✓ EASY TO USE

YOUR BRANDING

- END-USER FLYER – CAN BE BRANDED TO INCLUDE YOUR LOGO, COMPANY COLOUR AND DETAILS
- PRINTABLE VERSION WILL BE SUPPLIED
- MY HOME ALARM APP CAN BE BRANDED WITH INSTALLER DETAILS
- APPS ARE FREE BUT ONLY AVAILABLE WITH ARC-MONITORING

CRITICAL UPGRADE

YOUR LOGO HERE

We would like to notify you of a critical upgrade to your security system from your current telephone line based digital communicator to a wireless radio product called MiniAir.



HIGHER LEVEL OF SECURITY

Your current system relies on a telephone line to send intruder signals. These telephone lines are being closed down now as part of the UK's All IP project. Telephone lines have already started to disappear and as soon as June 2021 over 1 million premises are estimated to be affected! MiniAir uses radio technology to overcome this threat whilst monitoring your system 24/7 and the Alarm Receiving Centre will be notified of any fault within 24 hours.



WIRELESS SIGNALLING

MiniAir operates using a multi-network WorldSIM, which provides access to all mobile networks. The unit will transfer to the strongest available network in order to deliver your alarm signal through to the Smartphone App or the ARC. This offers the best guarantee of radio coverage, increasing its reliability and your property's security.



END-USER APP

MiniAir embraces the Smartphone revolution and offers a free and easy-to-use App for you to view event logs and receive push notifications in the event of an alarm activation. The Alarm Receiving Centre will also be notified at this time. You can also cancel any dedicated phone line used by your digital communicator as MiniAir does not require it.

✓ FREE INSTALLATION

✓ ROAMING SIM

✓ FREE SMARTPHONE APP

For more information on All IP please visit: www.csl-group.com/allip

THIS CRITICAL UPGRADE WILL TAKE PLACE AUTOMATICALLY ON YOUR NEXT MAINTENANCE VISIT. NO FURTHER ACTION IS REQUIRED. THERE WILL BE A SMALL INCREASE OF £50 TO YOUR ANNUAL MONITORING, HOWEVER THIS WILL LARGELY BE OFFSET BY YOUR CALL COST SAVINGS.

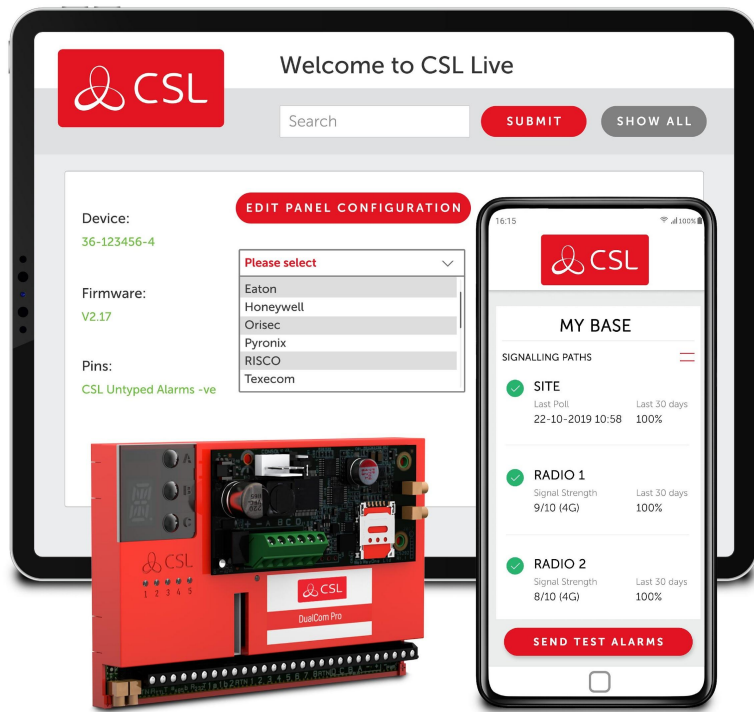
IN PARTNERSHIP WITH



Tel: 07777 777777

www.yourwebsite.com

THANK YOU



THANK YOU

What is the right solution?

Finding right solution can be very confusing.

In addition to CSL, there are a number of other suppliers that can provide different solutions

G4S can advise on best options to minimise disruption and future proof your investments - home, business or asset.

What Do I Do Next?

- Consider alarm services you and your customers use
 - Will they work on All IP Network?
 - When do they need to change over?
- **PLAN - There is a lot to do!!**
- Talk to G4S - we are here to help
- Keep informed of when you or your customers' areas will switch over using link on G4S PSTN Migration web area

<https://www.g4s.com/en-ie/what-we-do/ireland-secure-solutions/pstn-migration-explained>



Where do I go?

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Or visit our dedicated G4S PSTN

Migration Explained web area at :

<https://www.g4s.com/en-ie/what-we-do/ireland-secure-solutions/pstn-migration-explained>





Questions?

Securing Your World

