

Webmarketers

SOP's

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WM Office Wifi Network

Subject: Bell Giga Hub

Primary SSID: BELL565

Situation: 34 devices total · 27 on Wi-Fi · **1 access point today**

Almost everyone in the office is on a laptop and moving around, so the fix isn't cables — it's **more access points and seamless roaming**, so no single radio is ever the bottleneck.

The idea

Today all ~27 wireless devices talk to **one** radio inside the Giga Hub. An access point can only hold one conversation at a time per band, so as the room fills, everyone waits in line. Spread those devices across **two or three access points** — wired back to the network and sharing one Wi-Fi name — and each one carries a third of the load while laptops hand off automatically as people move.

What actually changes

Today — one access point

flowchart TD

```
I[Internet] --> H["Giga Hub<br/>router + the only Wi-Fi radio"]
```

```
H --> D["≈ 27 devices share one radio set<br/>→ airtime contention when the room fills"]
```

Proposed — multiple APs, one network

flowchart TD

```
I[Internet] --> H["Giga Hub<br/>(bridge mode)"]
```

```
H --> S["PoE switch"]
```

```
S -->|Ethernet| A1["AP · ch 1"]
```

```
S -->|Ethernet| A2["AP · ch 6"]
```

```
S -->|Ethernet| A3["AP · ch 11"]
```

```
A1 --> C1["~9 devices"]
```

```
A2 --> C2["~9 devices"]
A3 --> C3["~9 devices"]
A1 -. "roam · one SSID (BELL565)" .- A2
A2 -. roam .- A3
```

Each AP is wired back and on its own channel, carrying ~9 devices. Laptops hand off between them automatically — same name, no reconnecting.

Why this fits a room full of laptops

- **Signal in every room** — APs placed across the floor mean strong Wi-Fi wherever people sit, not just near the hub. Dead corners and the far conference room stop being a gamble.
- **Seamless hand-off** — one network name with fast-roaming (802.11k/v/r) lets a laptop move AP-to-AP mid-call or mid-VPN without dropping. People never see it happen.
- **No one device drags the rest** — roaming assist nudges a laptop off a far AP it's clinging to, so a single weak, distant connection can't hog airtime for the whole room.

Four things that make or break it

1. **Wire each AP back** — run Ethernet to every AP ("wired backhaul"). Letting APs relay over Wi-Fi roughly halves speed per hop and undoes the benefit.
2. **Plan the channels** — give neighbours different lanes: 2.4 GHz on `1 / 6 / 11`, a separate 5 GHz channel each. Same-channel APs just talk over each other.
3. **One name, everywhere** — identical SSID + password on every AP so devices roam automatically. Keeping `BELL565` means nothing has to be re-paired.
4. **Enough APs, spread out** — roughly one AP per 10-15 active devices or ~1,500 sq ft, placed apart with overlapping coverage — not clustered in one spot.

Two ways to build it

	Business APs + Giga Hub in bridge mode (<i>recommended for your size</i>)	Bell Whole Business Wi-Fi pods
What	e.g. Ubiquiti UniFi / TP-Link Omada on a small PoE switch	Add Bell's mesh pods to the existing hub

	Business APs + Giga Hub in bridge mode (recommended for your size)	Bell Whole Business Wi-Fi pods
Strengths	Best roaming, coverage & control; scales; relieves the hub's Wi-Fi and router load; one dashboard	Simplest to add; Bell provisions and supports it
Trade-offs	One-time setup; you/IT manage it	Less channel/roaming control; still best wired back
Effort	One-time setup	Low
Manages	You / IT	Bell
Ceiling	High	Moderate

What it takes (rough shape)

2-3	access points for your floor
1	small PoE switch to power + wire them
~½ day	to mount, cable and configure
\$400-\$1,000	hardware, depending on brand & count

Cutover — how the switch-over goes (after hours)

1. **Keep the current network name** — configure the new APs with SSID `BELL565` and the same password so every laptop and phone reconnects on its own.
2. **Cable and place the APs** — mount them spread across the floor (ceiling or high on a wall), each wired to the PoE switch. Set channels 1 / 6 / 11.
3. **Hand routing to one device** — business-AP route: put the Giga Hub in bridge / Advanced DMZ mode behind a router. Pod route: just add the pods — no bridge needed.
4. **Walk the floor to confirm roaming** — take a call and walk end to end. The connection should hand off between APs without a drop. Adjust placement if a spot is weak.

*Figures are planning estimates for an office of this size; final AP count and cost depend on floor layout, wall materials and the gear chosen. This plan addresses the Wi-Fi bottleneck — spreading ~27 mobile clients across several APs. If the Giga Hub's router/NAT load is also a limit, the bridge-

mode path is what relieves it.