Episode Book

EPISODE #5477

Who Owns the Antennas? Israel's MVNO Puzzle

PUBLISHED	23 September 2026 at 10:25 UTC
DURATION	19:49
LISTEN	myweirdprompts.com/episode/israel-mvno-network-detection/
HOSTS	Corn, Herman, Hilbert
SCRIPT MODEL	deepseek-flash
VOICES	chatterbox-regular (chatterbox-local)
PIPELINE	V5.2
BOOK GENERATED	19 October 2026 at 17:36 UTC

SYNOPSIS

Israel deregulated its mobile market to multiply competitors, but the antennas collapsed into two shared networks — PHI and S-Plus — and virtual operators aren't required to disclose which one they ride. A listener's phone migration saga raises two questions: can you detect the host network from the outside, and do MVNO subscribers get the same service as direct ones? This episode walks through the MCC/MNC registry, the PLMN broadcast trick, crowd-sourced cell maps, and why identical radio links can still deliver very different speeds at peak.

TRANSCRIPT



Corn

So the way I see it, there are really only two questions that matter in this entire sector. Who owns the antennas, and does anybody have to tell you.



Herman

That's the whole thing in two sentences, and it took Daniel a phone migration and a bad month to get there.



Corn

Right, so, Daniel wrote in. And this one's a saga, so let me set it up properly. He says Israel has an interesting telephone sector, which is a very polite way of putting it. Deregulation forced the emergence of virtual mobile network operators. In a country this small, it makes sense that you can only have so many physical operators putting up antennas. They rise and ebb in popularity. New ones show up. He's been trying to sort out his own phone connectivity, and he recently moved from an operator with good service but terrible customer service, to one with atrocious cellular reception.



Herman

Which is a very Daniel trade.



Corn

It is exactly the trade he would make. So then he's reluctant to go back to the previous utility, because the customer service was that bad, and he decides to look for a virtual operator running on the original infrastructure. And this is where he hits the wall. Virtual operators don't necessarily disclose which network they're on. The public MNC list Israel maintains doesn't include the underlying infrastructure links. So he asks, is there any way to get this data from the outside? Can you build a detector? Is frequency overlap the easy way to figure it out? And then the second half: if you're on a virtual operator, do you get the same quality of service as a direct subscriber? And if regulators don't mandate that parity, how do you figure out what you're actually buying when the marketing material clearly isn't what you can rely on?



Herman

Two questions, and they're different questions. One is a detection problem. The other is a service-quality problem.



Corn

And today we're going to try to build the detector Daniel couldn't find, and figure out what's actually knowable from the outside.



Herman

Let's start with the shape of the market, because the numbers are strange. Israel's mobile country code is 425. Everything in the country sits under that. And the Ministry of Communications registry, current as of the middle of July, lists twenty-seven MNC codes across twenty-two operators.



Corn

Twenty-seven codes, twenty-two operators. So some operators hold more than one.



Herman

Three of them do. Cellcom holds three codes. Partner holds two. Pelephone holds two. And there's one code, MNC 10, that has no assigned operator name at all, which is a nice little piece of unresolved paperwork sitting in a public registry.



Corn

What's the actual market share look like?



Herman

Roughly Cellcom at forty percent, Partner at about thirty, Pelephone at about thirty. Those three names have been on the board for decades.



Corn

And yet the interesting thing is what happened underneath them.



Herman

Right. By this year, the market has collapsed into two shared radio infrastructures. PHI Networks, which is Partner and Hot Mobile. And S-Plus, which is Cellcom, Pelephone, and Golan.



Corn

Two. There are two sets of antennas in the country that matter.



Herman

Effectively, yes, for the consumer-facing picture. And that is the tension running through this whole episode. Deregulation was supposed to multiply competitors. What it actually produced was two shared empires, and competition moved off the antennas entirely. It's now on price and on service.



Corn

Which is fine, until you're standing in the Negev trying to figure out why your phone doesn't work and nobody will tell you whose tower you're not connected to.



Herman

So let's go back. How did we get here.



Corn

Twenty twelve.



Herman

Twenty twelve. Moshe Kahlon was communications minister, and he did the thing that actually worked. He licensed Golan Telecom and Hot Mobile, and that triggered a price war that cut monthly bills by roughly sixty percent.



Corn

Sixty percent. That's not a trim. That's a different market.



Herman

It saved consumers billions of shekels, and it's one of the few reforms in this country that everybody agrees actually delivered. And the regulators weren't subtle about the strategy. GSMA Intelligence was writing at the time that around a dozen MVNOs and two new mobile licensees were set to be approved, explicitly to challenge the three incumbents.



Corn

A dozen virtual operators as a policy instrument.



Herman

Deliberately. They wanted the incumbents surrounded. And it got silly. Supermarket chains launched MVNOs. You could buy a mobile plan with your groceries.



Corn

Which tells you the margins on reselling somebody else's network were thin enough that a grocery chain thought it was worth doing.



Herman

And then the regulation kept loosening. In twenty twenty the ministry put out a draft bill to move telecom licensing to a general authorisation and registration regime. The stated goal was to reduce the bureaucratic burden and lower barriers to market entry. And the framing they used is the one that matters here. They described it as moving regulation from ex-ante to ex-post.



Corn

Translate that.



Herman

Ex-ante means the regulator approves you before you operate. Ex-post means you register, you operate, and the regulator comes after you if you do something wrong. It's a lighter touch. It's cheaper to enter the market. And it is also, structurally, a decision not to police the details up front.



Corn

Including the detail of who you're actually riding on.



Herman

Including exactly that detail. Which brings us to why a country this size consolidates. Sharing models come in a few flavours. MORAN, which is shared antennas but separate frequencies. MOCN, which is shared radio and sometimes pooled spectrum. And plain national roaming.



Corn

And the economics are not mysterious.



Herman

They're not. Building and running towers in the eastern Negev or up in the Golan Heights is a low-return business. Sharing lowers the operating and capital cost in exactly those regions, and it improves coverage continuity on the highways, which is where a dropped call actually annoys somebody.



Corn

So the sharing is rational. It's the disclosure that's missing.



Herman

That's the gap. The public registry lists MNC codes and operator names. That's it. It does not map virtual operators to their host networks. There is no public, authoritative MVNO-to-host mapping in Israel. The best you get is third-party. Telecompaper keeps an MVNO list. ZolSim publishes field guides. And both of them describe their own coverage as representative rather than exhaustive.



Corn

So the regulator publishes the phone book, but not the family tree.



Herman

The reason virtual operators don't disclose is not sinister, it's commercial. The host network's branding is a competitive asset. If you're reselling capacity on Partner, you may not want your customers thinking of themselves as Partner customers. And the regulator doesn't require it. So the incentive runs one way and the obligation doesn't run at all.



Corn

Which means the answer to Daniel's first question, can you get this data from the outside, is yes, but you have to build it yourself out of three different signals.



Herman

And the first one is the easiest, and most people never look at it. Read the MCC and MNC off the device. Apps like NetMonster or Network Cell Info will show you.



Corn

Give me the codes.



Herman

425-01 is Partner. 425-02 is Cellcom. 425-03 is Pelephone. 425-07 is Hot Mobile. 425-08 is Golan.



Corn

And what does that actually tell you when you're on a virtual operator?



Herman

This is the part that resolves Daniel's whole problem. The virtual operator broadcasts the host's PLMN. So if you're on a virtual operator riding Partner, your phone will show Partner. If you see Partner LTE and the brand on your invoice is something else entirely, that's not a glitch. That's the answer.



Corn

The phone is more honest than the marketing.



Herman

The phone is completely honest. It has no reason not to be. It's just reporting what it's camped on. So the displayed network name often does reveal the host, even when the company selling you the plan won't say a word about it.



Corn

Which makes Daniel's frequency-overlap idea interesting, but probably the wrong tool.



Herman

It's the wrong tool for the question he's asking, and the reason is precise. Because the virtual operator broadcasts the host's PLMN and uses the host's frequencies, frequency overlap will confirm the host. It will tell you you're on Partner's spectrum. But it will not distinguish a virtual operator subscriber from a direct Partner subscriber, because on the radio side there is no difference. You're on the same frequencies either way.



Corn

So frequency overlap answers a different question than the one he asked.



Herman

It answers whose spectrum am I on. It doesn't answer whose customer am I. And the second signal gets you closer to the physical reality. That's the eNB and gNB site identifiers.



Corn

The tower IDs.



Herman

Every base station broadcasts an identifier, and community databases like CellMapper have logged them and tagged which sites belong to PHI and which belong to S-Plus. So you can look up the site your phone is attached to and see which of the two infrastructures it sits on.



Corn

Which is the digital version of standing outside and looking at the mast.



Herman

It is exactly that, except it's a crowd-sourced map built by people who did stand outside and look at the mast. And the third method is the blunt one. Run comparative speed tests. Same spot, same time, host subscriber versus virtual operator subscriber.



Corn

And that's where the second half of Daniel's question starts, because the speed test is where the difference shows up.



Herman

This is the part I'd flag hardest. ZolSim's line is the one to remember. Same tower, same frequency, but not necessarily the same priority, congestion policies, or availability of advanced features.



Corn

So the radio link is identical and everything above it may not be.



Herman

Everything above it may not be. At congested sites the gap runs around ten to thirty percent at peak. And that range is the real consumer story, because ten percent is nothing. You will never notice ten percent while browsing. Thirty percent at peak, on a heavy upload, or on a game, or on a camera streaming to the cloud, you will notice.



Corn

And there's a specific example that makes it concrete.



Herman

There is. ZolSim poses it as a question a customer would ask. Why, at the same spot, does Partner give me two hundred and fifty megabits and the virtual operator on Partner only ninety?



Corn

Same tower.



Herman

Same tower. And the answer is priority and speed profile, or blocked carrier aggregation combinations. The virtual operator may be limited on which frequency bands it can bond together, and bonding bands is where the big numbers come from. Israeli four G runs on eighteen hundred, twenty-one hundred and twenty-six hundred. Five G runs on the three and a half gigahertz band and the seven hundred megahertz band. If your plan blocks some of those combinations, you don't get the aggregate.



Corn

So the tower is fine. The pipe to the tower is fine. What's throttled is how many pipes you're allowed to open at once.



Herman

That's the mechanism. And the advanced services are a separate axis. VoLTE, Wi-Fi Calling, VoNR. Those can be delayed or restricted by device, and they depend on the core network and the IMS layer, not the radio. ZolSim's FAQ puts it well. In terms of radio, yes, it's the same cell. But the core and the interfaces can be separate, and that affects voice over LTE, voice over new radio, Wi-Fi calling, and ping.



Corn

So some virtual operators feel almost identical to the host, and others feel a generation behind.



Herman

And that's the myth to kill. The idea that a virtual operator is always worse is wrong. It depends entirely on which one. Some have an identical four G and five G experience to the host. Others have small limitations. You have to check per operator. There's no rule.



Corn

Now the regulatory question, because Daniel asked it directly. Is quality-of-service parity legally mandated?



Herman

I could not find any Israeli regulation requiring virtual operators to receive identical service quality to host subscribers. And I want to be careful about how I say that, because the research budget ran out on this specific question. So it's a gap, not a confirmed absence. But everything I did find points the same direction. The quality differences are governed by commercial priority profiles. The technical term is QCI or 5QI, which is essentially a queue label on your traffic.



Corn

You get put in a lane.



Herman

And which lane you're in is a commercial negotiation between the virtual operator and the host, not a legal entitlement. The regulator moved to ex-post. Ex-post regulation doesn't reach into a queue label.



Corn

So the thing Daniel is worried about, that the marketing can't be trusted and there's no law to fall back on, is correct on both counts.



Herman

Correct on both counts. The marketing is not a reliable signal and the law is not a backstop. Which leaves the consumer with the patchwork. The MNC code, the CellMapper site tag, and a speed test at peak hours.



Corn

Which is a strange thing to have to do to buy a phone plan.



Herman

It is. And there's an irony sitting in the middle of it. Deregulation was supposed to give consumers more choice. What it gave them was more brands and fewer actual networks, and then it didn't require anybody to tell them which network they were on.



Corn

The choice got wider and the information got thinner.



Herman

And the consolidation makes the detection problem easier while making the service problem potentially worse. Fewer hosts means fewer possible answers. Two infrastructures instead of four. But more subscribers piled onto shared radio means more congestion, and congestion is exactly where that ten to thirty percent gap lives.



Corn

The detector gets simpler and the thing it detects gets worse.



Herman

That's the trade.



Herman

I keep coming back to one detail, though. The virtual operator isn't lying about the coverage. The coverage is the host's coverage. The bars on your phone are real bars. What's not disclosed is the priority behind them, and that's invisible until the moment it matters.



Corn

It's not a coverage problem dressed up as a service problem. It's a service problem hiding behind real coverage.



Hilbert

How many of them were there, though. That's what I want to know.



Corn

Sorry, how many of what?



Hilbert

The virtual operators. You said a dozen were going to be approved. I want to know how many actually got off the ground, because I spent a summer in a shop on Rehov Yafo selling SIM cards and unlocked handsets, and I can tell you the number of them that actually worked outside the city was not a dozen.



Herman

I don't have a clean number. The registry has twenty-two operators in it, but that includes the facilities-based ones.



Hilbert

Twenty-two in the registry. Fine. I had a laminated sheet behind the counter. Hand drawn. One of the guys did it with a marker, and we updated it every time a customer came back angry.



Corn

What was on the sheet?



Hilbert

Which SIMs worked where. That was it. Columns down the side were the brands we sold. Across the top was the country, roughly, split into the places people actually drove. Tel Aviv, Jerusalem, Be'er Sheva, the road down to Eilat, the Golan. And a tick or a cross in each box.



Herman

How did you fill it in?



Hilbert

Complaints. Somebody buys the cheap SIM, takes it down south for the weekend, comes back Monday furious because it worked great in Tel Aviv and died in the Negev. We put a cross in the box. That was the database.



Corn

That's the whole thing. That's CellMapper.



Hilbert

It's the same sheet. Ours was on the wall, theirs is on the internet. Same information, same source. People telling you where it stopped working.



Herman

The customers who came back, did they know why it died?



Hilbert

No. And I didn't either, not properly. I'd tell them the SIM was riding on a network that didn't have towers down there. That was the whole explanation. I had no training for it. I was nineteen. I'd been there three weeks.



Corn

You were doing QoS support with a marker pen.



Hilbert

I was doing something. There was one man, he came in twice. Second time he's waving his phone at me, telling me the new SIM had better coverage because he could see more bars. Same bars. Same phone. Different logo on the screen. He'd convinced himself the picture had changed.



Herman

The bars were identical.



Hilbert

Identical. He just liked the new logo better.



Corn

You couldn't explain the priority queue to him.



Hilbert

I couldn't explain it to myself. Anyway. The shop's gone. The sheet's gone with it. The bloke who drew it, I think he went into insurance.



Herman

That's the part that lands for me, though. The laminated sheet is the honest version of this entire market. It's not a regulator's map, it's a record of where people got burned.



Hilbert

That's what it was. Right, I have to go. I'm meant to be picking something up from a place that closes at six and I'm not going to make it.



Corn

Go.



Hilbert

It's a door. I'm not going to make it.



Corn

Go.



Herman

The detector Daniel wanted doesn't exist as a single tool. It's a patchwork. The MNC code, the community site database, and a speed test at the hour that matters.



Corn

The patchwork is the story. The regulator publishes the codes and not the links. The operators know the links and won't say. The hosts negotiate the priority and don't have to disclose it. So the consumer ends up doing the work that a registry entry could have done in one line.



Herman

The open question is whether that ever changes. Whether the ministry decides the host mapping belongs in the public registry, and whether service parity ever becomes something a regulator mandates instead of something two companies negotiate in private.



Corn

If the market keeps consolidating, the detection problem gets easier and the congestion problem gets harder, which is a strange direction for a reform that was supposed to be about competition.



Herman

It's the direction it went.



Corn

Thanks as always to our producer, Hilbert Flumingtop, who is currently sprinting toward a door.



Herman

This has been My Weird Prompts.



Corn

If you want to tell us we got something wrong, or send us a prompt of your own, email us at show at my weird prompts dot com. We'll be back soon.