

Inside Brazil's TV 3.0 Revolution

Matt Stagg in conversation with Paulo Henrique Castro, SET

IAMT Studio Visual Podcast Series

Duration: 15:52

Hi there, and welcome back to the IAMT podcast with me, Matt Stagg, and a very influential guest. And you're going to find this good, because it hasn't been done. Paulo Henrique Castro, president of SET, CEO and founder of Mediatech Lab. Paulo, how are you?

Fine. Good to see you.

So would you be okay to introduce yourself and also say a bit about what you do, especially around SET?

Yes, yes. SET is our broadcast engineering society in Brazil. So it's an association where we discuss technology, we discuss business. It started 38 years ago, talking only about TV, but now it's about media.

38 years.

38 years ago. Yeah, it was kind of inspired by SMPTE, a broadcast engineering society. So we started with TV, but now it's about media, innovation and everything in this ecosystem. I'm the president now. I started there as an intern, like, 28 years ago, and now I'm president, so that's great.

That's how we got into the business. And we could talk for hours about the skills gap and how we get people in, but what I really want to talk about is TV 3.0. What is it, and why now?

Yeah, yeah. Brazil is in the middle of a big transition now. We are a country with more than 200 million people, and people rely on off-the-air broadcasting. So we have 70% of households with external antennas. Our prime content is on free-to-air television in Brazil, so we have all the Formula One, the football matches — the soccer football matches. And it's a media that people like a lot. And we have a system that is digital, but we miss the connection with the digital ecosystem. So we designed a system with the latest technology tools, like VVC encoding, like MPEG-H audio, a lot of software layers for interactivity. All the channels now will be apps on your TV set, and we use broadcast and broadband fully connected. So for the consumers at home, for the viewers, they don't know where the signal is going.

So the signal is coming to their house. If it's something of everybody's interest, it's coming from the broadcast. Broadcast will be a big CDN with low latency. But if you want something personalised, you can ask, you can choose on the menu, or you can have targeted advertising, just like the digital media, and you receive that over broadband, but fully seamless and connected. So we designed this system, and we'll be launching just prior to the FIFA World Cup in June this year.

And do you know what really — I was blown away when we spoke, because in the UK, all we talk about is the switch-off of terrestrial TV, and everyone's going, "Where is it going?" You've

done both. To have a broadcast and a stream is just — surely that's, you know, the best way to do TV. How do you run it? How do you scale it? You know, what happens if someone presses pause?

Yes. The idea is that when the two worlds begin to, like, diverge, you have either the streaming or the broadcast. All the broadcasters start building their own streaming infrastructure. So they have, like, the back office ready. They have the servers, they have the assets, they have the metadata, but they are different worlds. What the engineers in Brazil did was, like, to check a way to combine that, because when you have streaming, the more successful your transmission is, the more you have to pay for CDN, for distribution. And the broadcast is the other way. You do one investment in a big city, like, with 20 million people, it's done. You get 20 million people with one investment.

Exactly. The business model there is the more people that watch it, the cheaper it becomes in terms of ROI.

So our idea is to combine the best of both worlds. So we designed a system with the latest tools. For example, to have better spectrum efficiency and energy efficiency, which everybody's looking for nowadays, we get MIMO transmission. So we have two sets of antennas for receiving and for transmitting, and also LDM, and the latest error correction tools. So we have a very robust system. The system is based on ATSC, but enhanced with new tools. And with that, of course, it's challenging, because we are kind of pioneers, the first to use some kind of technology.

Yeah, I mean, I'll be honest, when we spoke, I was like, "This is what we've all been talking about in Europe," and you've done it. I mean, it's awesome.

But we have a very special condition in Brazil, because free-to-air TV — of course, we are losing some of our advertising to the digital media, like elsewhere. But we're still very relevant. People watch free-to-air TV, people love free-to-air TV, and on free-to-air TV, we have our national content. We have our culture. So we still have local news and local stories, and so we have a mix and match of what we have, like, globally with locally. So I think that's what broadcasting is about. What everybody wants to see is usually on broadcasting.

Tell the story. You know, I'm just trying to work out — because I've been an advocate for, actually, mobile broadcast, you know, 5G, well, formerly 4G, and I was a great advocate of it, and the ship sailed. You know, Apple didn't support it in their middleware. If you don't have Apple in the UK, there's never going to be enough people in a cell site watching the same thing. What I'm really interested in is: is there a multi-screen angle, the fan engagement? How does that work? Is there a way of moving from the broadcast stream to come back to the unicast stream? So you're watching sport, you pause — how does that work? How's the interaction between, you know, streaming and linear?

Yeah. The nice thing is that our off-the-air transmission is not based on MPEG multiplexing, like the previous version. We are using ROUTE/DASH, so it's the same protocol that streaming uses for transport. So we have a common layer: it's all IP, it's all ROUTE/DASH. It doesn't matter if it's off the air or over the internet. So there's a middleware that we developed that takes care of the seamless switching. And seamless switching to the extreme, so you can have personalised advertising during a commercial break. So we also have bidirectional communication because of

the internet. So we get the metrics of viewing. We know you, what you like, and we know your profile, just like social media. So if you don't have kids, you're not going to have advertising for diapers. If you don't drink, you'll not get advertising for beers. So you can be targeted. If you're looking for a car, you're going to get that.

I prefer beers over diapers.

Usually they are combined, right? You buy both.

Well, yeah, I've got three children, so I totally know where you're going. Now, this is also interesting. So you're moving beyond a single — so you get the feed. You've got the football match. You've got the World Cup. How do you do the advertising? Is it just the linear model? Or if I looked at a multi-screen replay, how does that work?

Yeah. What we have now, I call it a set of tools. Now it's up to the creatives to put the tools to work. Of course, we have some visions. Like, I can share some with you. So when you are a broadcaster and you're connected to, like, the broadcast centre for FIFA or the host broadcaster for the Olympics, they have, like, 80 different viewing angles. They have all the statistics, the heat map, the list of players, extra information about how many kilometres each one ran, everything. But we don't have space to put that, right?

It's the L-bar, isn't it? Like, we all know it. Like, we've grown up with it.

And maybe my father, my grandmother, they just want to sit, watch and relax. But the new generation like video games, like many screens, a lot of information at the same time, different angles. So we're just going to have tools to offer that. So we can have a brand offering: "Do you want to see the heat map? Any time, just click on this button, and you have it, and it's sponsored by IAMT." For example.

Well, this is — this is the thing, and we spoke about this, and I've got a column in Streaming Media, and it was exactly that. How do you — I called it "Skin in the Game". You've got the feed, and the one you do is on screen, on the big TV. You have to. That's where it goes, but sometimes people don't engage in that way. We talk about Gen Z, Gen Alpha. They — you know, it's not an attention thing, it's relevance, and this gives the ability to engage in a different way.

You've got all the — you have your own —

You've got all the camera angles.

The camera angles, exactly. And there's more — I think audio will be a big player. Because sometimes there are people who like the neutral commentator, and someone likes the fan: I'm a fan of team A, and the other a fan of team B.

And influencers.

The influencers tell you jokes. And they don't care about the game, they just say, "Oh, look at the hair of that guy," you know? And the young people like that.

Well, they don't say it to me.

Yeah, yeah. No, no, not for you.

They say, "Look at the bald guy."

Yeah. But we can have multiple audios, we can have just the crowd, and you can mix because MPEG-H is object-based. So you can have your own mix: "I want to just hear the crowd. Now I just want to hear my fans," or whatever, you know? So these kinds of options, the personalisation, and when you start to know our audience one by one, you can tailor — we can pre-configure your standard, and you don't have to do much, you know?

And then we're talking about hyper-personalisation, aren't we? "Yeah, I know what you like. Here you go now."

You know, even in the news, just to get something — you have a window of 30 minutes of local news, but there are many subjects, but I like city safety, health and education. Okay, my news will be more focused on that, because that's what I'm interested in.

Now, that is cool. That is cool, because —

It's data-driven.

— people don't have time, you know? And, you know, I wake up and I put the news on, and I want to know stuff I need to know before I go to work.

Yeah. Weather or traffic.

Now, we'll continue talking after this. One of the big things before we wrap up is Brazil, and what you're doing is a blueprint for the world. How are you going to share this knowledge? How does it work?

I think Brazil will be the big lab everybody will be watching.

Yes, exactly. The lab.

Exactly. Exactly. And we are willing to take this risk of experimentation, okay? We have creative people there. We have people — viewers — that like TV, like our content. So in this lab, we can have a lot of experience that we will share. We are planning at SET, our society, to have a kind of road show, an international road show. So, of course, big events like IBC in Amsterdam, NAB here in the US, and also Inter BEE in Japan, the KOBA show in Korea. We go there, and we share in paper sessions. But also going to the Latin American countries, our neighbours, where we have friends. And explain our experience, tell why we chose this system. We chose a system that is more expensive than the existing one, because the existing one has scale. But we believe that we can bring scale, because with 100 million people in Brazil, and maybe if you talk to Mexico, there's another big country, and the other countries of Latin America.

And if you're going to choose a new system, I think you have to plan for the long term. If you choose an old technology, you'll be obsolete very soon. If you get the latest tools at the beginning, of course it would be more expensive. But later on, that will compensate, you know?

Absolutely. And the one thing is — it's going to be a problem. Like in the UK, we're going to switch off terrestrial TV. Where does that traffic go? You know? Yeah, well, you can say, "Oh, we're streaming." But, you know, that's a lot for a backbone. And, I mean, we're going to continue talking, and I'd love to be with you at IBC. I mean, I'm an advocate for what you're doing. After our talk, I was like, "Hey, guys" — we were talking with, like, the regulator — and I

have to say thank you, you and Brazil, for helping us out, because there's a problem, and there's a blueprint. So I just want to say thank you. We're going to continue talking. We'll be back later on. And thanks for watching.

Transcript produced automatically from the episode audio and lightly edited for readability. Minor wording may differ from the recording. © IAMT — theiamt.org/studio