

# Uncoupling

# spaghetti

**S**outhern Queensland's integrated transport authority TransLink is taking on its biggest timetabling task — a revision of services that adds 100,000 more passenger seats on the suburban rail network and provides better bus-rail connections.

The mission is to bring bus and rail together into a public transport spine that stretches across 100km from Caboolture to the north of Brisbane and out to Ipswich in the west.

This north-west corridor revision is the first of a staged exercise across the entire TransLink network which will be completed next year.

But for now, stage one goes live on June 6, and the schedulers are hoping like mad they got it right.

Behind the project is TransLink's Network Planning Manager Roman Gafa, steeped in 30 years of bus knowledge.

Gafa also comes to TransLink with expertise in Hastus, a software-based

scheduling and planning tool developed by Canadian firm Giro that is used extensively by the world's leading public transport authorities.

TransLink had been searching for a Hastus 'guru' to drive the changes and found one in Gafa, who had been working with the program in his former role at Brisbane Transport (BT).

"I had 10 years at BT and 12 months ago this opportunity came up with TransLink to implement Hastus, so I moved over," Gafa says.

"At BT, I was managing network scheduling and all the events in their charter unit — for Suncorp Stadium and the Gabba — all done from where I worked at BT."

While BT was by and large single mode, with bus and a handful of river ferries, the TransLink scenario is quite different.

"I know a lot of this stuff because part of what I managed at BT was a forerunner to TransLink many years ago with CityTrans, and I had some insight into rail," he says.

"The theories behind bus and rail are almost the same, except with rail you have to know more about having one train on a track at a time."

The starting point for the revision rested with Queensland Rail (QR) with an objective to reduce crowding on their peak services and provide more seats.

TransLink's CEO Peter Strachan seized on the opportunity presented by the QR initiative to create an integrated network that fed buses into the rail spine.

"We've had a good hard look at the QR timetables," he says.

What Strachan and his team discovered

was the confusing array of rail stopping patterns on the Caboolture to Ipswich line.

"If you look at the stopping patterns — we reckon there are about 18 stopping patterns — the research we've done is [that] it's confusing for customers," Strachan says.

"What we wanted to do was simplify it for passengers, and the second thing was to get more capacity, particularly in the busy Ipswich corridor."

Apart from the confusing timetable and when and where each train would stop on the line, research from passenger counts also found too many commuters were forced to stand because there were no available seats.

"So to get more capacity we had to standardise the intervals between the trains," says Strachan.

The rail system from June 6 will work on a 'clock face memory' timetable, with trains departing from the busiest nodes serviced by bus interchanges at the hour, a quarter or half past the hour.

And there will be just two stopping patterns, not 18, either all stops or express as each train runs down the line and on through Brisbane's CBD.

Gafa says the current network is like spaghetti.

"At the moment it's a bit like the issues they've had in Sydney — a bit like spaghetti — and this will be uncoupling the spaghetti to a degree," he says.

In untangling the strands that had grown out of control and congested the network, Gafa's main task was to ensure bus connections linked with the new QR clock.

Gafa likes the idea of having a timetable



TransLink CEO Peter Strachan getting the message out about the Authority's timetabling and bus-rail integration phases across southern Queensland

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TRANSLINK'S LARGEST-EVER TIMETABLE REVISION WILL GO LIVE NEXT MONTH AFTER MONTHS OF PLANNING AND CONSULTATION, BASED ON LOCAL OPERATOR KNOWLEDGE AND A HANDY SCHEDULING PROGRAM. **DAVID GOELDNER** WRITES

that's easy for passengers to memorise, but logistically, getting the bus to the train on time wouldn't be quite so easy.

"We need to integrate all the buses to meet those times and the key now is that once we restructure bus timetables they will meet new times at rail stations with a reasonable amount of connectivity between 5 to 8 minutes," he says.

"For passengers it means if they get the bus at ten past the hour it meets the half past the hour train."

This is where Hastus enters the frame, running software models to arrive at the best connections across the north-west TransLink network spine, which encompasses eight bus operators.

"The big change for this was the way the routes were originally constructed," Gafa says.

"For a lot of bus operators there is a lot of change in this, and all of our northern operators — Hornibrook, Bribie, Caboolture, Kangaroo, Thompsons and Sunbus further north and Westside out west — all of their timetables are changing because apart from one or two incidences, they don't meet rail connectivity anymore."

This is where the Hastus scheduling tool has been deployed with the greatest intensity: implemented about a year ago at TransLink, it's now starting to grow legs, as Gafa puts it.

"All of our timetables are in this system which makes it easier to assess what's going on."

Crunched into the Hastus system is each rail timetable and every bus operator's timetable.

"We start using the Hastus tool to look at connectivity and make sure things are integrated," says Gafa.

The Hastus program looks at the new rail spine, where services are currently sitting, and writing the bus-rail connections.

"You put some rules in the background, like, 'must have five minutes' connectivity', and then Hastus will optimise the schedule, shifting things around," Gafa says.

"You also need to be mindful that there may be bus-to-bus connectivity."

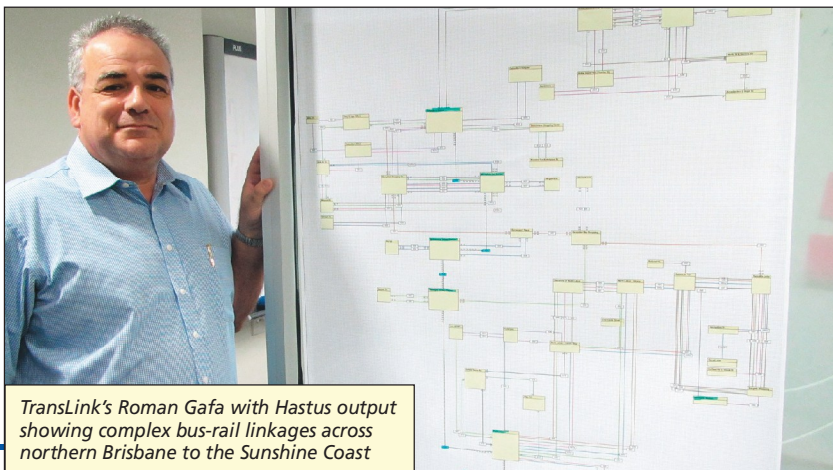
Gafa says in situations where bus-to-bus connectivity linked a considerable distance from the rail spine, TransLink planners were required to negotiate with the operator to improve the linkages.

He says an operator's local knowledge and input is critical to the process.

"I could sit here and plan whatever I like on a desk, but we present options and give these back to the operator," Gafa says.

"They may say it works, or there are problems, and if what we propose won't work for the operator, we sit down and discuss it."

Gafa says this may mean providing a



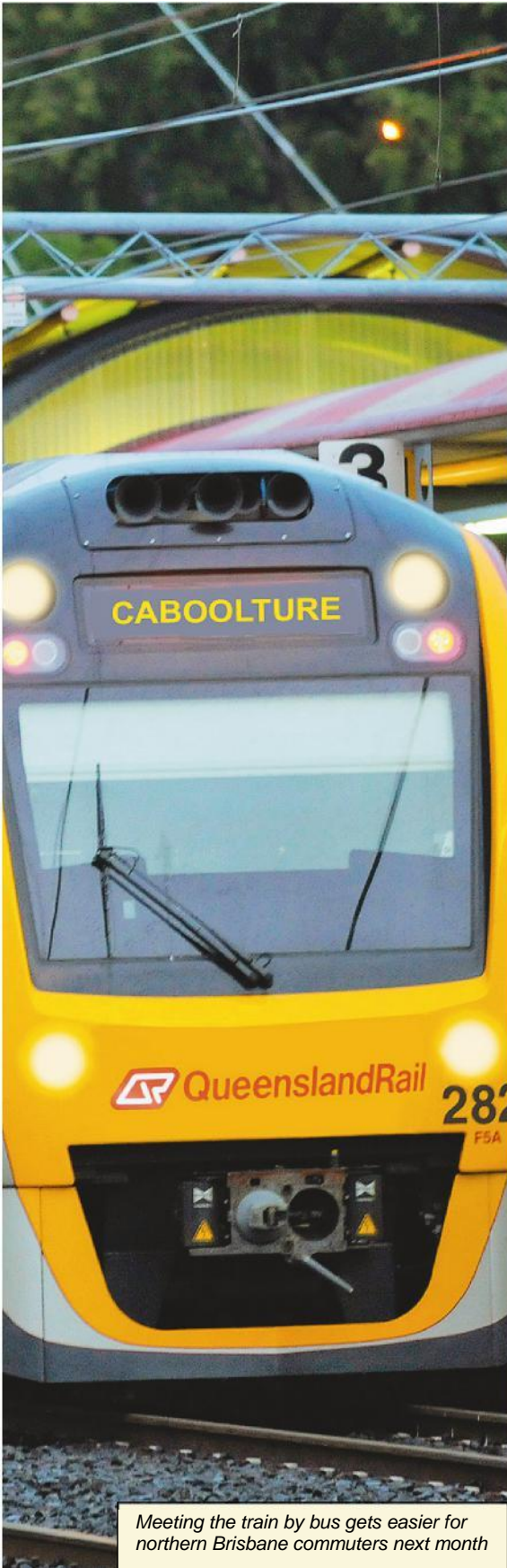
TransLink's Roman Gafa with Hastus output showing complex bus-rail linkages across northern Brisbane to the Sunshine Coast



The TransLink-Queensland Rail 'clock face' timetabling revision will affect all bus-rail interchanges across southern Queensland by mid-2012

# OPERATIONS

## TRANSLINK TIMETABLE REVAMP



Meeting the train by bus gets easier for northern Brisbane commuters next month



Hornibrook Group Business Manager Martin Hall with General Manager Rolf Mitchell, prepared for the TransLink changes coming in June

few extra trips, for which there is some additional funding to allow the operator to make that happen.

“The key is that it must work for the punter and work within the resources that you’ve got.”

The last major South East Queensland network timetable revamp was 15 years ago, predating TransLink.

“Prior to the Hastus system there was quite a lot of manual work, and before TransLink everybody did their own thing,” says Gafa.

“Queensland Rail went off and did their own thing and at some point they might have said to all private operators that they are changing the timetables — and [that] they’re changing next week.”

Gafa says each operator would also have then gone off on their own bat and done their own thing.

“Back then it was their own revenue, their own fares,” he says.

Gafa says Hastus has aided integration. “The spine is the rail and the bus is the workhorse and we’ve got to make it work, and so we work with each of the operators to do that,” he says.

By mid-April, Gafa had signed off on all operators affected by the northern corridor timetable revision, but to get there required much discussion and some deep thought.

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