

 **TRANSMAX**



STREAMS[®] Intelligent Pedestrian Crossing

TURNKEY SOLUTION

STREAMS Intelligent Pedestrian Crossing turnkey solution



To help road authorities address increasing road congestion, Transmax has developed an Intelligent Pedestrian Crossing solution that allows traffic signals to be operated more efficiently.

THE SITUATION

If a pedestrian crosses quicker than the time allocated, the traffic signals still wait until the allocated time has passed.

Transmax's solution addresses this issue by releasing this unused time allowing it to be given back to other movements, which improves traffic flow.

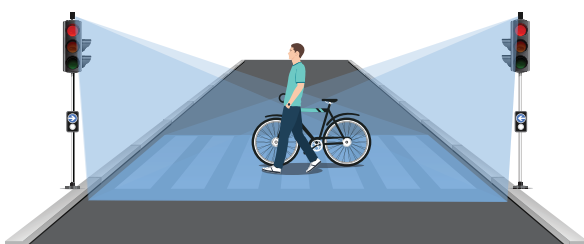
How does the solution work?



 **PEDESTRIAN ON-CROSSING DETECTION**



 **CYCLIST/PEDESTRIAN ON-CROSSING DETECTION**



The first part is to detect the pedestrians as they cross the road. This is accomplished by using approved radar on-carriageway detectors.

These detectors provide contact closure outputs that are wired directly into the detector inputs on the controller. Transmax has developed personality code to use these contact closure inputs to track pedestrians as they cross the road. The Intelligent Pedestrian Crossing solution detects when a pedestrian has finished crossing and expires the Clearance 1 time for the crossing. The extra time can then be reallocated to other movements.

Features & benefits of the solution

SAFETY

Traditionally, traffic engineers extend the crossing time to cater for vulnerable pedestrians even if they only use the crossing for a small part of the day. Transmax's Intelligent Pedestrian Crossing solution can detect people as they cross, enabling traffic engineers to provide vulnerable pedestrians with an appropriate amount of time to cross the road at the right time.

Also, drivers generally don't get frustrated at waiting for pedestrians to complete their crossing. What they do get frustrated at is having to wait for no apparent reason. By closing the crossing down more efficiently, driver frustration will be reduced leading to better safety outcomes.

EFFICIENCY

By reallocating phase time from a pedestrian crossing with no pedestrian to other phases, more time can be given to the high-volume approaches. In a congested period, the transfer of this wasted time to the critical movements can make a significant difference to the operation of a network.

RELIABILITY

The personality coding contains several logical checks to ensure the sensors are working as they should. If the sensors should fail, the crossing will revert to a standard crossing with a configurable alarm being raised in STREAMS.

Real world benefits from the Intelligent Pedestrian Crossing solution

To prove the benefits of using this technology a trial site in Cairns was used.

The site (Brinsmead-Kamerunga Rd, Loridan Dr and View St-M3142) has a long pedestrian crossing running perpendicular a heavy north / south movement. The intersection is close to/at capacity with regular concerns raised by members of the public about its operation.

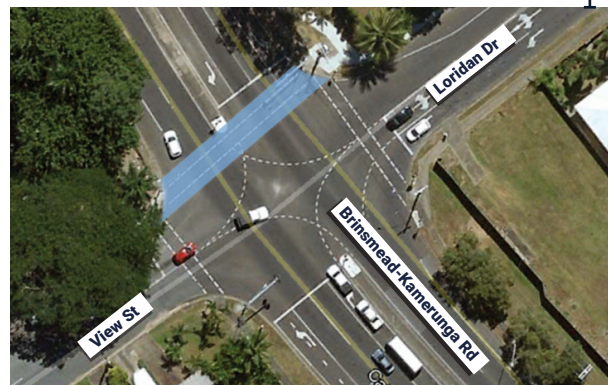
In the morning and afternoon peaks, long queues of traffic can form whilst waiting for the pedestrian crossing to finish, long after the pedestrians have walked/cycled across.



A Sidra™ analysis of the intersection before and after the Intelligent Pedestrian Crossing was installed showed benefits of:

- **A 20% reduction in the inbound queue length**
- **An annual operating cost saving of \$240K during the AM peak alone.**

This is on top of intangible benefits of reduced driver frustration from the intersection operating smarter and not appearing to sit on red for no reason.



Ideal locations to install the Intelligent Pedestrian Crossing solution

Ideally all pedestrian crossings would have the solution installed. Unfortunately, there is a limit to the number of detector inputs into a traffic signal controller. As such it is recommended that the solution be installed first on crossings that are:

Perpendicular to the main flow of traffic – these crossings tend to be longer crossings with limited vehicular traffic using the complementally vehicle phase.

Intersections with spare detector inputs

For reliability reasons, the maximum crossing distance is 32m however operationally crossings distances of up to 40m can be achieved assuming there are centre island posts to mount midway crossing detectors*



Interested in the Intelligent Pedestrian Crossing turnkey solution?



Contact Us

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 www.transmax.com

Get in touch with Transmax's Consulting Services team to find out more. Our in-house ITS experts can provide a full turnkey solution involving:

- **Updating the traffic signal plan**
- **Programming of the personality**
- **Installation of pedestrian on-carriage way detectors with your local traffic signal technicians.**
- **Ensuring the solution is working as required in STREAMS.**

With the STREAMS Intelligent Pedestrian Crossing solution in place in the community, we can work together to make roads safer, reliable and more efficient.



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