

Automatic Traffic Counter and Classifier Using Pneumatic Tube Technology

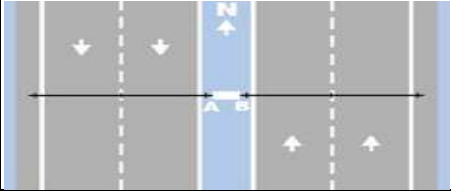
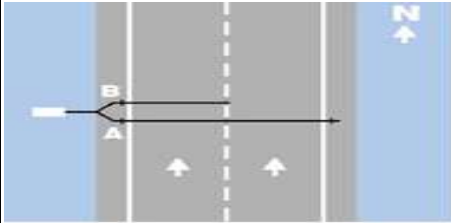
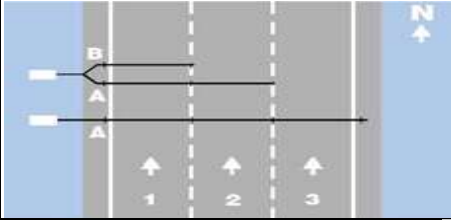
1. Introduction: -

The Pneumatic Tube Roadside Unit is a dual air-sensor data logging unit.

The Roadside Unit is used in several Count Sensor Layouts, to obtain short-term count information. Each of the sensors can be placed independently of each other, and across multiple lanes. Alternatively, the sensors can be used in a split mode.

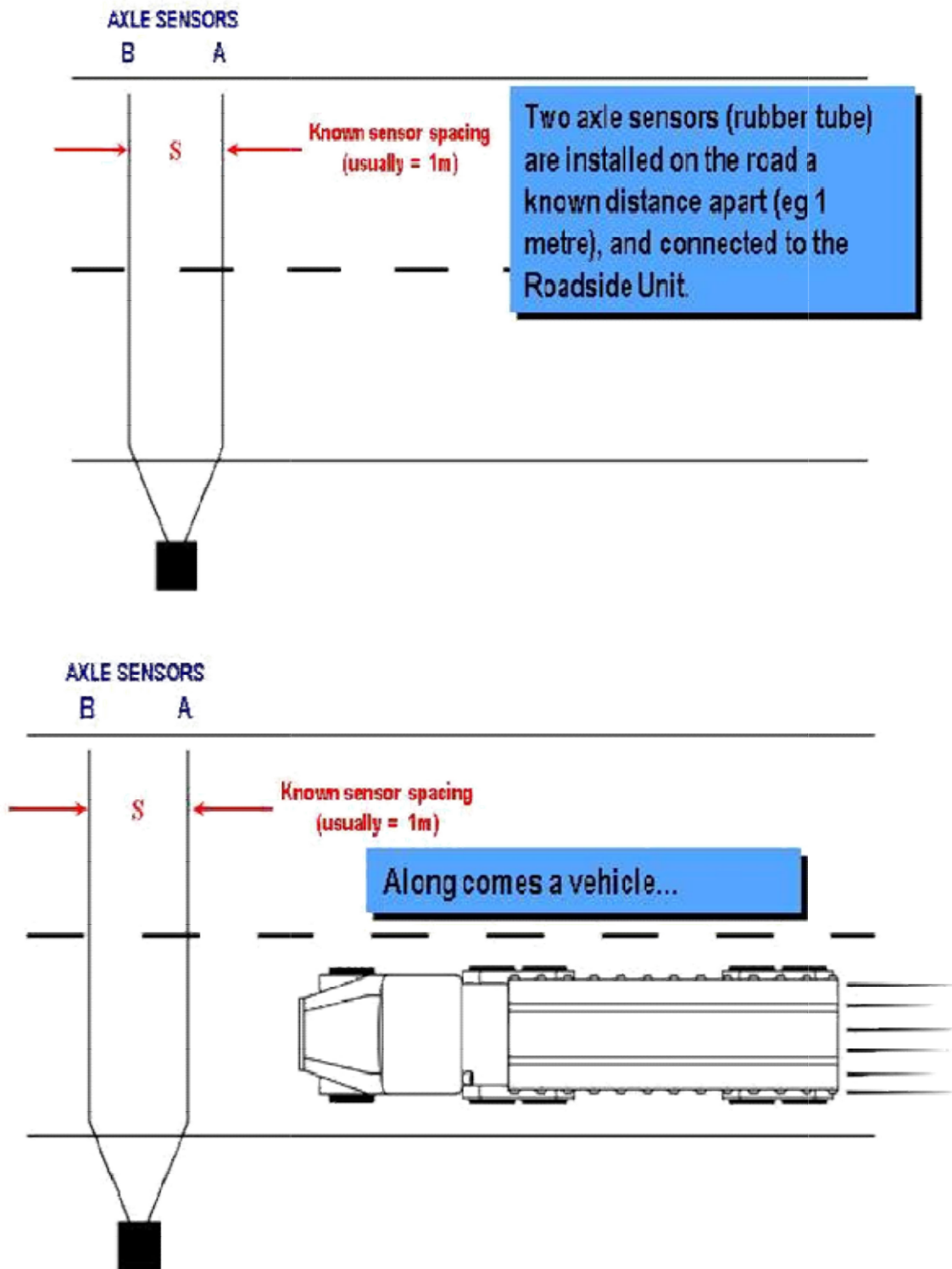
Count Sensor Layouts provide you with basic volume information, as well as traffic characterization, such as gap analysis. Each pneumatic tube should be secured using the method described for a Classifier Sensor Layout. Note that equal tube lengths are not an issue when using a Count Sensor Layout.

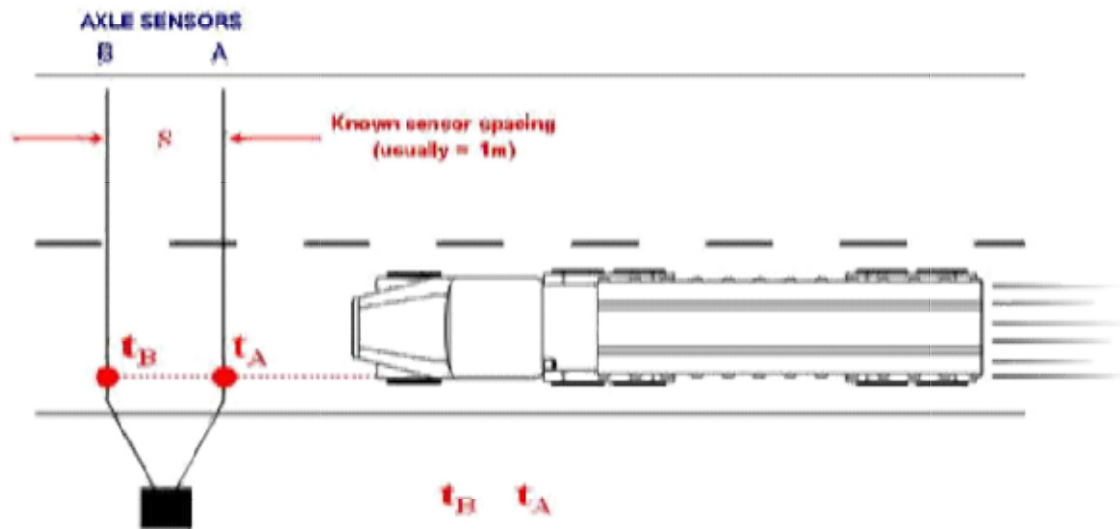
The table below provides some example Count Sensor Layouts:-

Count Sensor Layout	Description
	Separate Mode - Each sensor is used independently of each other.
	Split Mode - Used for obtaining axle based information across multiple lanes. Information for the left lane is simply B channel, and the right lane is derived from the A channel minus the B channel. MC Report handles the necessary data manipulation.
	Split Mode - This example extends the split mode concept across multiple lanes. Once again, MC Report handles all the necessary data manipulation to obtain information for a specific lane.

2. How Classifier Works:-

How Classifiers Work:-

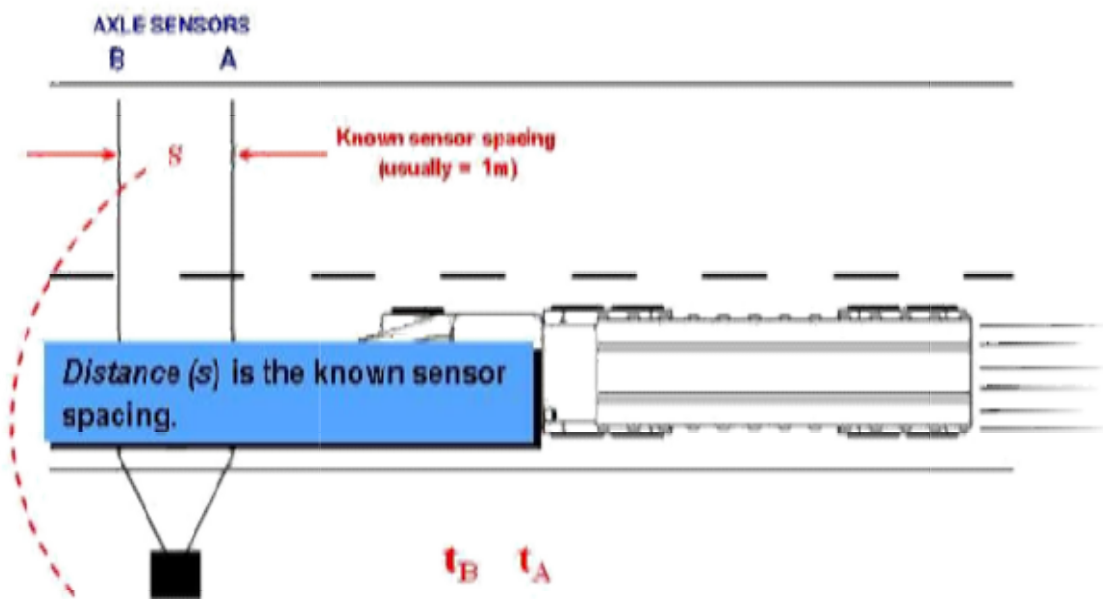




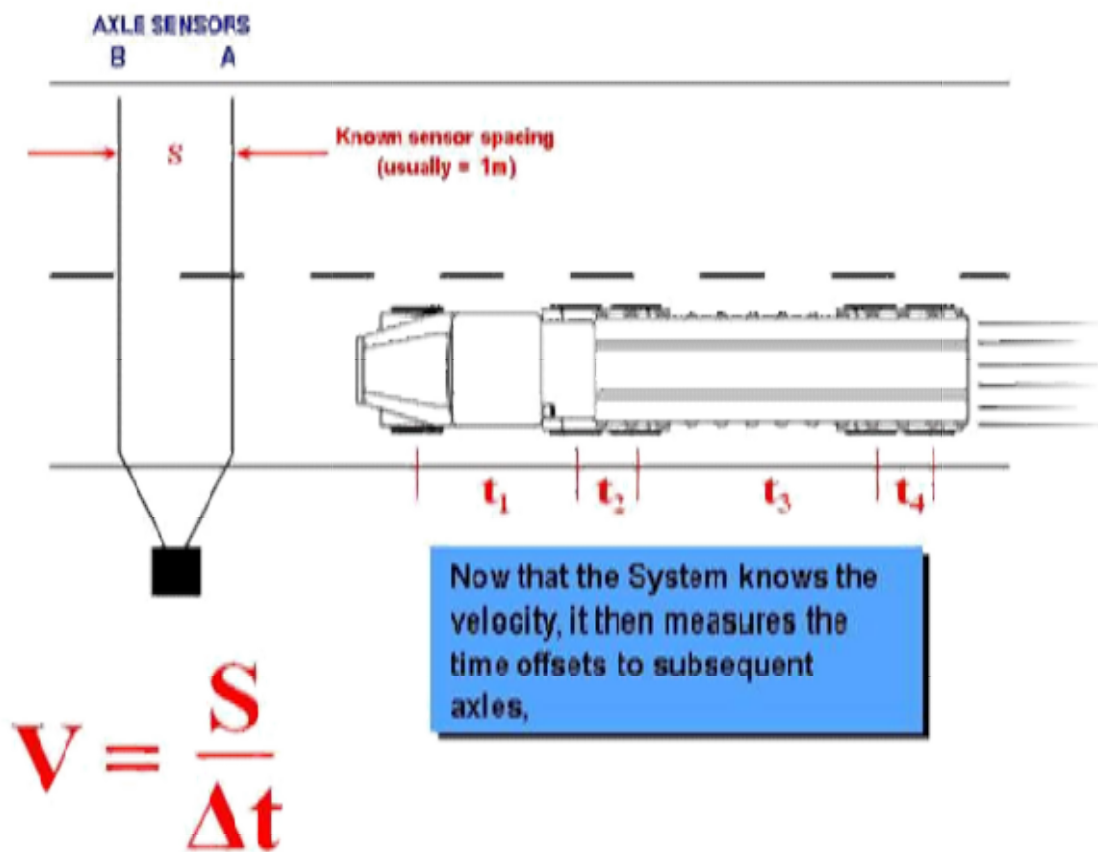
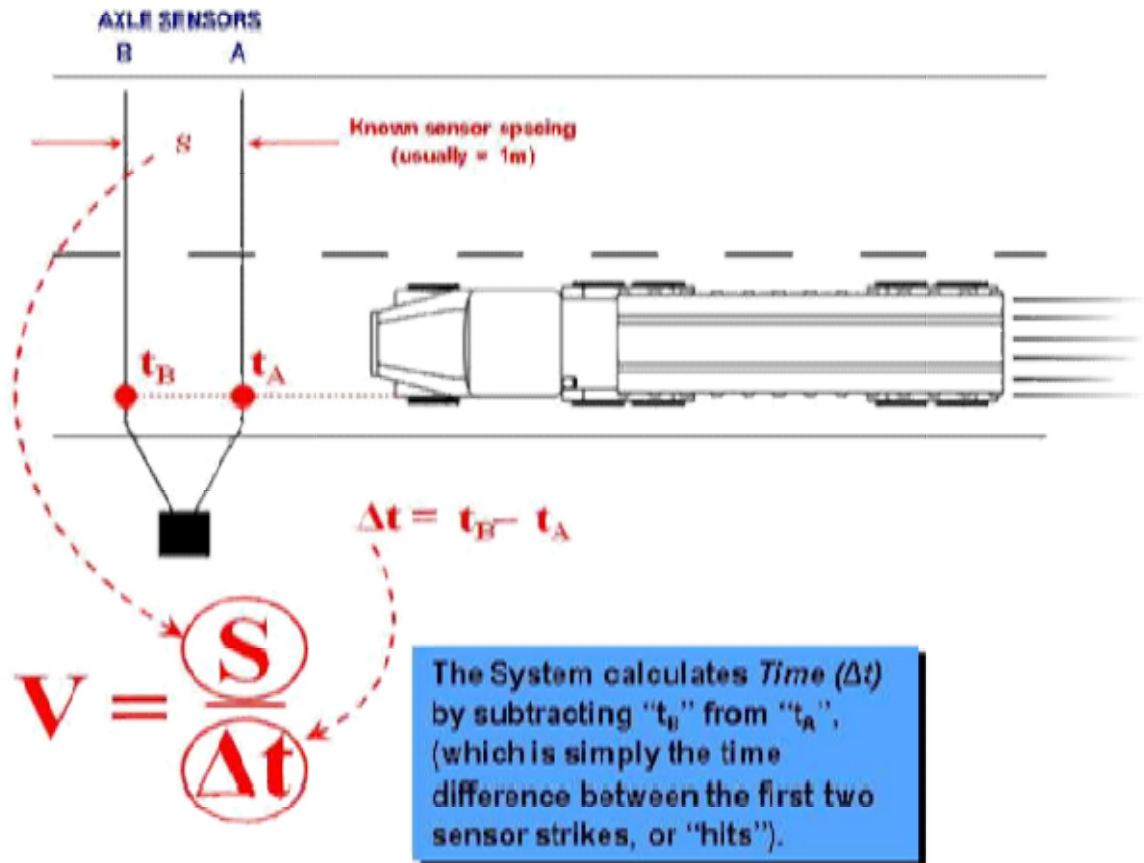
$$V = \frac{S}{\Delta t}$$

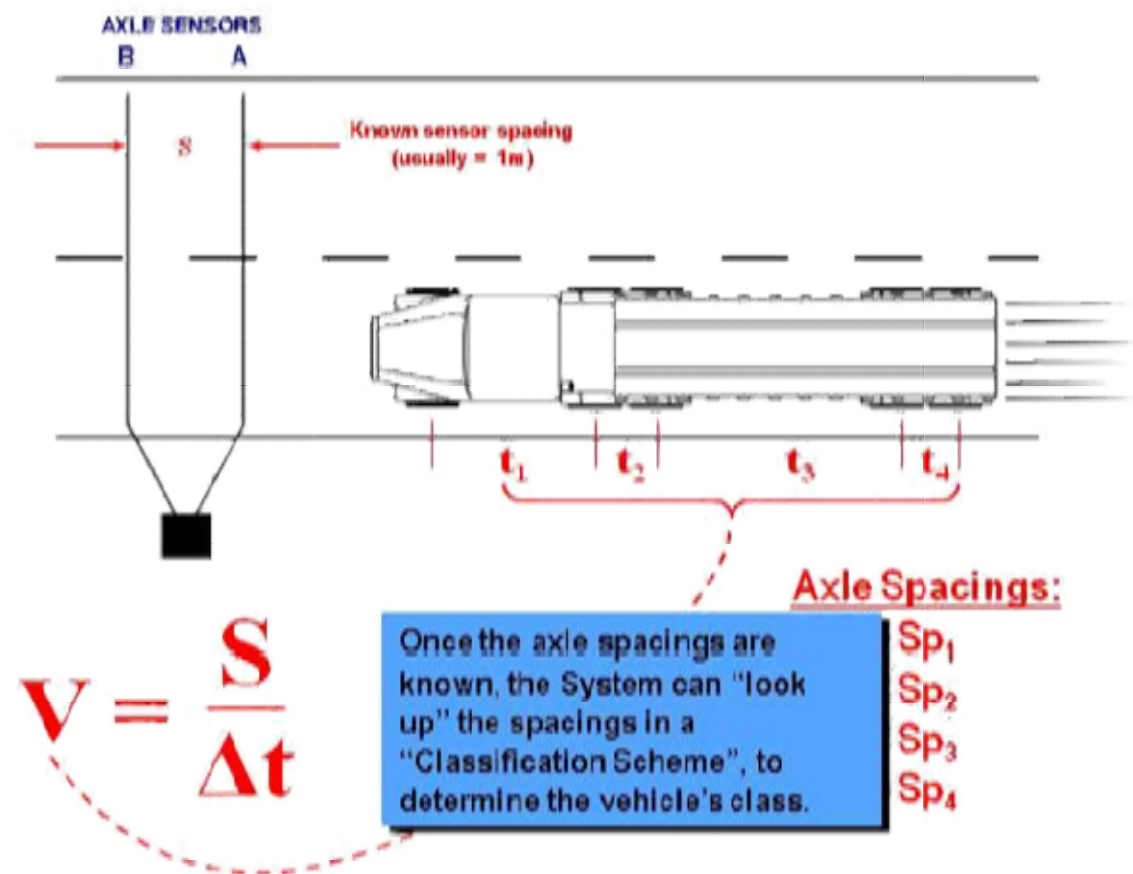
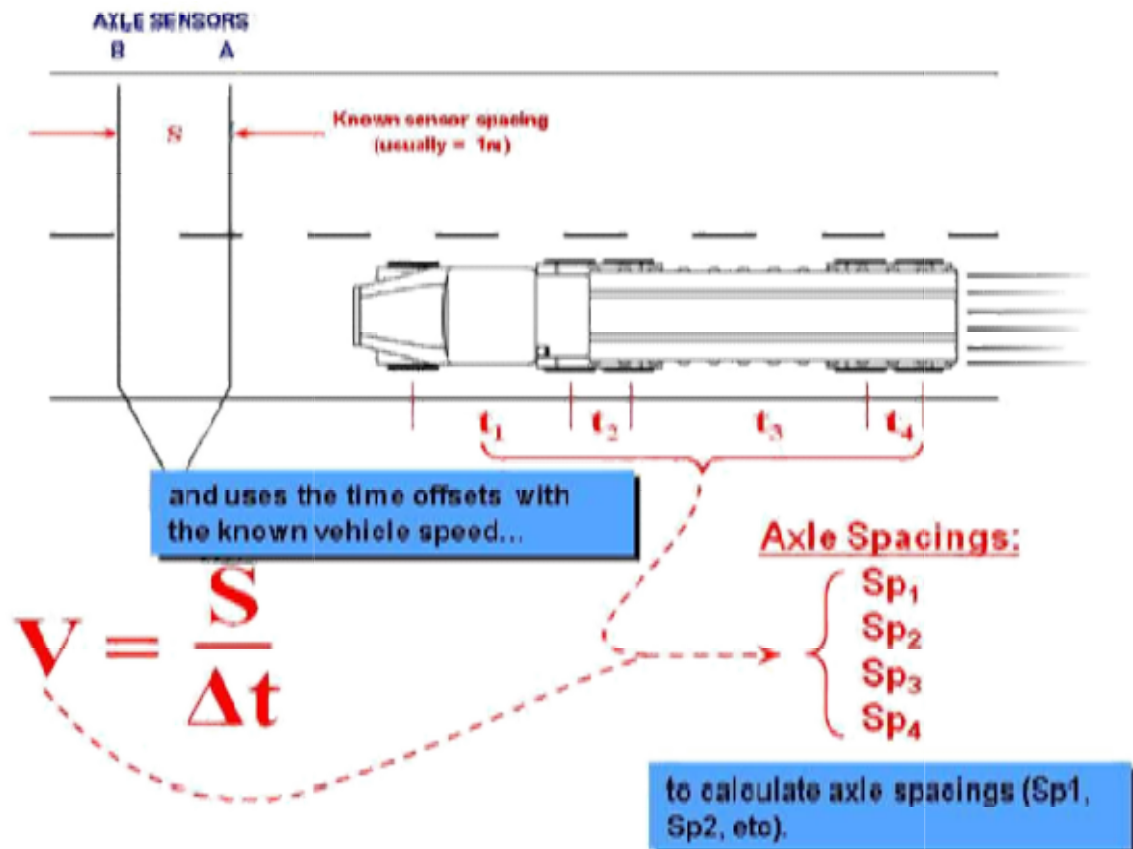
The System calculates the vehicle's speed, using the simple physical formula:

Velocity(V) = Distance(s) / Time(Δt)



$$V = \frac{\textcircled{S}}{\Delta t}$$





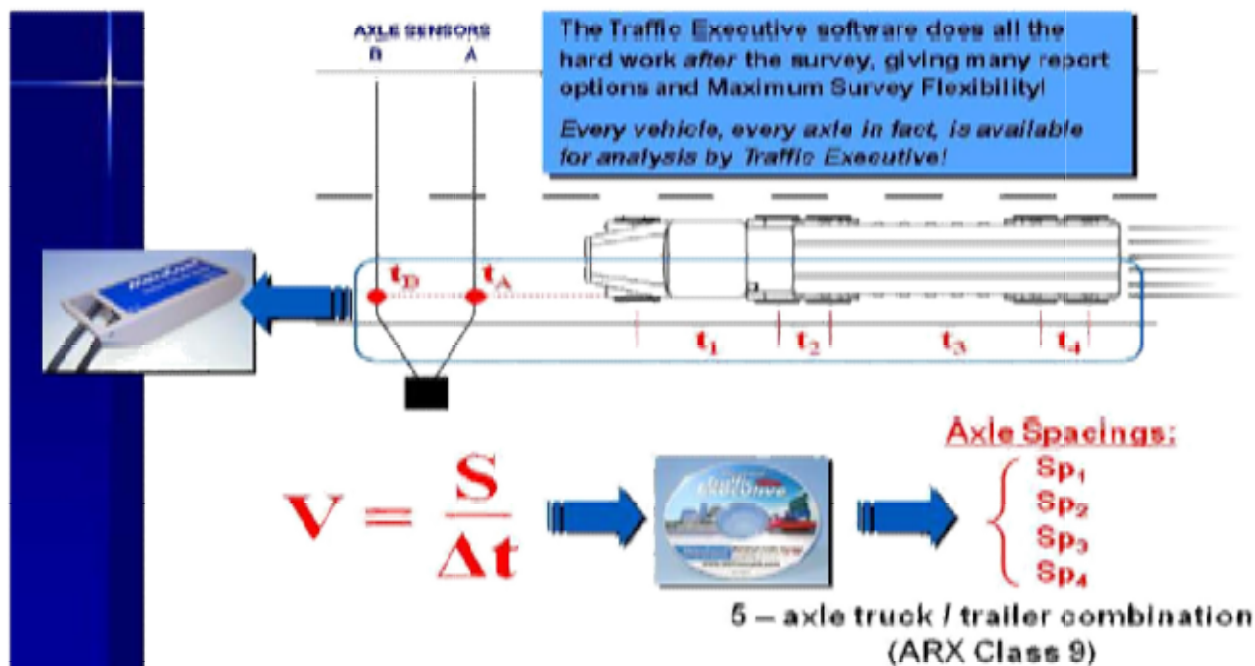


Sp₁
Sp₂
Sp₃
Sp₄

$$\mathbf{v} = \frac{\mathbf{s}}{\Delta t}$$


Sp₁
Sp₂
Sp₃
Sp₄

$$V = \frac{S}{\Delta t}$$



After the survey, process traffic data with "MCReport"...



To produce many tables, charts, graphs and user-defined formats.



Applications

Vehicle Speed

- Accident studies
- Crash investigations
- Enforcement

Vehicle Classification

- Road maintenance
- Toll checking

Speed / Volume / Classification

- Traffic calming

Routine statistics

- Planning
- Monitoring growth
- Seasonal trends

As you can see below that our ATCC System is fully complying with the Clause 4.5 of the contract.

