INTELIGHT MAXTIME ADAPTIVE 2.0

LOCALLY-DISTRIBUTED ADAPTIVE SIGNAL CONTROL TECHNOLOGY

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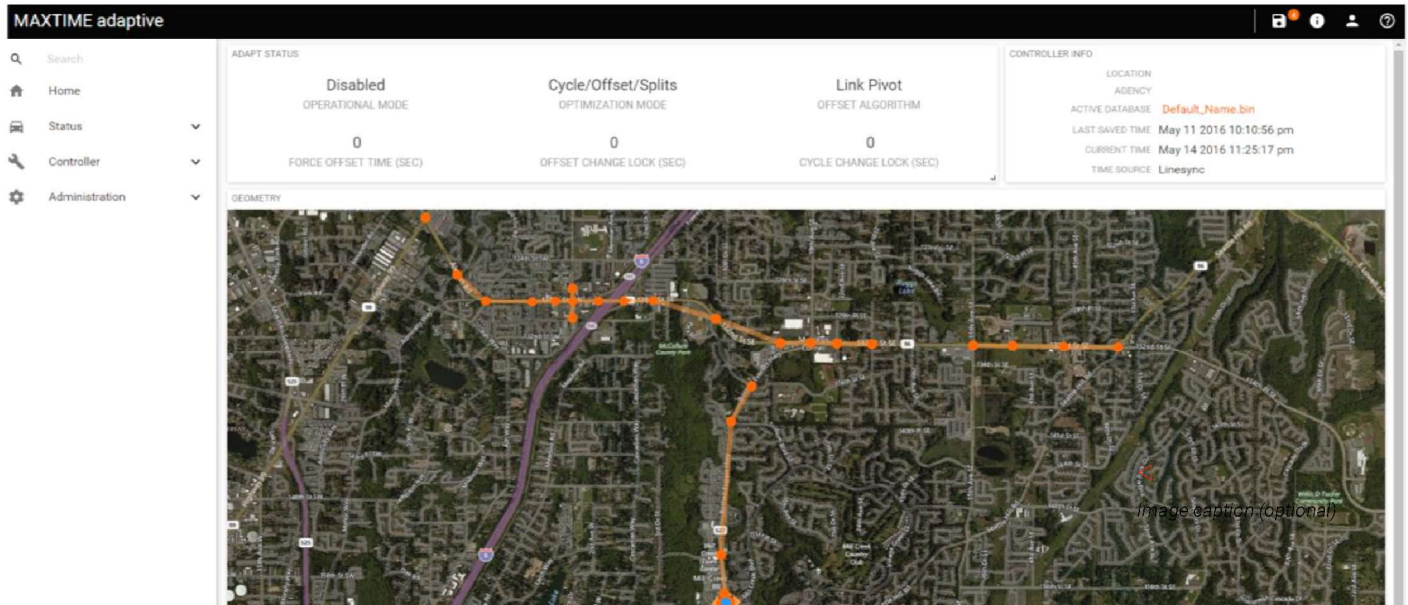
HIGHLIGHTS

- Provides adaptive cycle, offset, and split optimization.

- Uses high resolution data (1/10 th second logged on local controller)

- Uses widely accepted algorithms such as Purdue Link Pivot and Harmonic Cycle Length selection.

- Uses distributive processing to optimize signal timings. No need for a master or system processor

- Runs alongside MAXTIME local signal control software on the industry- standard ATC API.

- Provides dedicated web and text user interfaces.

- Delivers robust peer-to-peer synchronization mechanisms.

- Compatible with transit priority, preemption, advanced phase & coordination options, user logic, etc.

- Provides quick and efficient transition between plans when coupled with MAXTIME local signal control transition algorithm.

- Requires detection standards consistent with Purdue, INDOT, UDOT Signal Performance Metrics (SPM) requirements.

- Delivers corridor-based optimizations with the ability to handle crossing corridors.

A UNIQUE PLATFORM

- Communicates via peer-to-peer between controllers.

- Does not require a system/master field processor.

- Enables database editing through an onboard web server using a web browser—no proprietary database editor is required.

- Allows you to monitor and modify configurations from Windows and Apple computers, IPADs, tablets, smart phones without special software

- stores and loads hundreds of configuration databases on the controller

- Automates software updates via network or USB flash drive while intersection continues to run traffic signal operations

- Writes optimized timings to MAXTIME local signal control

INFRASTRUCTURE REQUIREMENTS

DETECTION REQUIREMENTS

- Compatibility with radar, video, inductance loop, magnetometer and various other detection technologies

- For cycle/offset optimization, advanced detection on the coordinated/mainline should be placed in advance of normal queueing 300–600 feet from the stop bar.

- For split optimization, stop bar detection on all approaches.

HARDWARE/SOFTWARE

- Intelight ATC with 1883 engine board or newer (NEMA or 2070) with ATC API.

- Intelight MAXTIME local signal control software.

- Ethernet communications via fiber, wireless, or Ethernet over copper between signal controllers.

WHAT IT CAN DO

CYCLE/OFFSET OPTIMIZATION

- Optimize vehicle capture rates based on detector calls and a coordinated window using 1/10th second highresolution data.

- Enable customizable, user-defined calculation periods, cycle length optimization ranges required for change.

- Calculate and protect minimum corridor cycle time from

- MAXTIME local signal control (with optional pedestrian protection).

- Optimize the corridor and synchronize results with controllers using peer-to-peer, distributive processing. No master or lead controller is required in the network.

SPLIT OPTIMIZATION

- Balance splits using approach/stop bar occupancy at local intersection.

- Balance time across rings and barrier groups to ensure optimum and equal split utilization across all phases of the intersection.

- Uses a combination of green occupancy (OCCGRN) and detector occupancy during the first five seconds of phase movement red (ROCC5-sec).

- Make split adjustments based on a user defined sliding scale of approach priority.

Greenway Dr.

Throughput Way

Intelight Expressway

Example of MAXTIME adaptive "Open Grid" Network

Q FREE