



Make the road **part of the navigation system** with markings that carry a code.

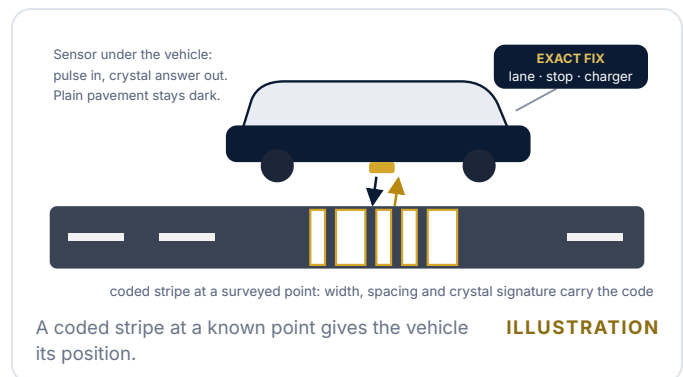
Intelligent Material mixes into ordinary road paint, marking tape, thermoplastic and floor coatings. To people the markings look the same. To a sensor they say where you are.

— THE PROBLEM

- ◆ Satellite positions drift by meters and disappear in tunnels and urban canyons.
- ◆ Electric buses charge through roof contacts that must line up with an overhead charger.
- ◆ Crosswalks, corners and bus stops are marked for the eye, which leaves people who are blind or visually impaired without the same cues.

— WHAT INTELLIGENT MATERIAL DOES

- ◆ **Codes in the paint.** Stripe width, spacing and crystal signature carry a message: lane, stop line, corner, charger or surveyed point.
- ◆ **A simple reader.** A phone-grade time-of-flight chip with an IMS optical filter and detection gate. Pavement stays dark; the marking lights up. About \$1 is an IMS cost target.
- ◆ **An exact fix.** Each pass over a coded stripe gives the vehicle a precise, time-stamped position.
- ◆ **Covered by U.S. Patent 11,667,799**, a cooperative guidance system and method granted June 6, 2023, for vehicles, pedestrians, airfields, robots and drones.



— PROOF

DEMONSTRATED

Tested with FHWA

In vehicle-to-infrastructure tests with the **Federal Highway Administration**, the sensor saw a strong signal on the marking and a low one on pavement, so each pass became a precise location event.

DEMONSTRATED

Prototype test

A sensor about 8 inches above the road read **3-inch stripes at 50 mph**, sampling 200,000 times a second.

IN DEVELOPMENT

Pilot with NovaVera

Electric-bus charger alignment: coded marking tape, an under-bus reader and a dashboard cue for the driver.

— HOW TO WORK WITH US

1 Sample

Request coded marking samples in your paint, tape, thermoplastic or floor coating.

2 Pilot

Test a site, a route or a depot with a reader matched to your vehicles.

3 License and supply

IMS licenses the patents; NovaVera Corp. commercializes the material, readers and systems.

Contact: <https://www.intelligentmaterial.com/contact/?topic=Transportation#contact-form>

We reply within two business days.