

# THE MISSION

Every match holds valuable information - but in the chaos of competition, details disappear in seconds. **M.A.P.S** captures, organizes, and unlocks those moments so your entire team can learn from every play, identify problems as they arise, and develop strategy based on real data.

## WHO IS **M.A.P.S** FOR?



### Drive Team

Review match footage frame-by-frame within minutes. Annotate plays, mark positioning errors, and build strategy for the next match.



### Scouting

Access every match from anywhere. Synchronize scouting data with video timelines to develop team strategy, dossiers, and alliance recommendations.



### Pit Crew

Pinpoint mechanical failures and impacts with slow-motion playback the moment they happen. Document repairs based on timestamped videos.

~2 min  
Match to  
Playback

Every Match  
Full-Field  
Coverage

Any Device  
Via Local  
or Cloud

Built by students. Designed for competition.  
Engineered to give every team the tools to  
compete smarter.

# SEE IT IN ACTION

Scan below to access full match playback, frame-by-frame review, and on-screen annotations for every match.



Available on any device with a browser.

Want to learn more?  
Ask someone from the  
**Cartography Team.**

Look for this patch:



or contact us below.

## GET IN TOUCH

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M.A.P.S  
MATCH ANALYSIS & PLAYBACK SYSTEM

NAVIGATE  
EVERY  
MATCH

Chart Your Course to Victory

FRC Team 2996 - Cougars Gone Wired



## M.A.P.S MATCH ANALYSIS & PLAYBACK SYSTEM

### THE PLAYBACK CORE

M.A.P.S is a self-hosted video platform built on Jellyfin, purpose-built for competition. Every match recording is recorded, uploaded, and quickly accessible. Scrub frame-by-frame, draw directly on-screen with custom annotation tools, and review footage on demand so nothing gets missed.

The Drive Team, Scouts, and Pit Crew each get their own dashboard through role-based access control, showing only the footage, data, and tools relevant to their job.

When a match ends, recordings upload automatically from the **Cartography Table** to the cloud or local server. M.A.P.S can be hosted anywhere — AWS, Google Drive, other cloud platforms with an API, or locally on any machine.



## MAP DATA ORGANIZED, SEARCHABLE, ALWAYS READY.

Each match recording is called a **Map**. These are automatically tagged, organized, and searchable by event, match number, and teams involved. Every **Map** carries full-field video, synchronized scouting data, and timestamped markers placed by team members or by the system.

These markers are called **Waypoints**. A **Waypoint** is a specific moment in a **Map** that can be linked to annotations, comments, scouting data, pit diagnostics, and more.

Drop a **Waypoint** on a critical play, a mechanical failure, or a scoring cycle, and anyone on the team can jump straight to that moment.

**Maps** are accessible on any device, over the internet or through the **Cartography Table's** local network, so the right footage is always available at the moment it matters most.



## THE CARTOGRAPHER THE OPERATOR

The **Cartographer** is the team member who runs M.A.P.S at competition. Responsible for operating the **Cartography Table**, they record matches, manage uploads, maintain the system, and ensure every **Map** reaches the team when they need it. They are part camera operator, part systems engineer, and part data specialist.

### THE CARTOGRAPHY TABLE THE STATION FOR CHARTING MAPS



The **Cartography Table** is a custom-built road case and serves as the dedicated station for recording every match, processing **Maps**, and uploading them to the cloud. It deploys in under five minutes and houses computational hardware, local storage, networking, cameras, and enough battery power to last the 12+ hours of competition.

-5 min DEPLOYMENT	12+ hr BATTERY	1 TB STORAGE
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### M.A.P.S Workflow

- Record**  
The **Cartographer** captures every match using the **Cartography Table's** integrated camera setup and a custom control application.
- Process**  
**Maps** are created and indexed. Priority matches (ones competed in) upload immediately; all others upload at a set, scheduled time.
- Access**  
The moment processing completes, **Maps** are available on any device over the internet or through the **Cartography Table's** local network.
- Review**  
Custom dashboards deliver tailored views to each sub-team. Scrub footage, drop **Waypoints**, and build strategy — all in one place.

## CHARTING THE FUTURE THE NEXT STEPS FOR MAPS



Atlas is the central hub for everything MAPS collects. Every **Map**, **Waypoint**, scouting database, and diagnostic log, all organized and accessible from one place. It serves as the main station for pit diagnostics, team overviews, and data management. Designed as a seamless extension of M.A.P.S, Atlas can live wherever the team needs it and keeps everything synchronized, whether connected to the internet or running locally.



**WayFinder** turns scouting data into clear, actionable strategy. Every button press from a scout is timestamped and synced with its associated **Map**, so teams can see exactly what happened and when. Scouting meetings and alliance selection, powered by **WayFinder**, benefit from performance trends, team comparisons, and compatibility analysis across every match.

### UNCHARTED TERRITORY

- ◆ Machine learning-powered scoring and strategy recommendations
- ◆ Automatic match recording triggered by sound recognition
- ◆ Predictive alliance compatibility scoring
- ◆ Real-time performance pattern detection

### 100% Open Source

M.A.P.S • WAYFINDER • ATLAS — ALL FREE, ALL OPEN

- ◆ Comprehensive documentation and setup guides (coming soon)
- ◆ Works with equipment your team may already own
- ◆ Software (M.A.P.S, WayFinder) — all open source
- ◆ Pre-configured kits coming in the future

Build it yourself, customize it your way, or purchase a kit. The choice is yours.