Summary

cloverleafApi is a proposed replacement to the CCMS text file protocol. Designed for real-time secure transactions with linear and digital ad scheduling systems – using legacy linear TV ad replacement infrastructure.

Problem Statement

The majority of today's advertiser-supported impressions are delivered by legacy linear TV ad replacement systems. These systems rely on inflexible workflows that are constrained by CCMS file systems.

CCMS was created in 1994 for an emerging ad industry that worked on a 24-hour clock. Systems could barely manage daily data flow due to the CPU and network capabilities of the time.

Business owners have created elaborate systems to work around the limitations of the 1994 design. Each workaround adds further complexity and fragility to the ad delivery ecosystem.

Workarounds are not able to get around CCMS's inability to handle real-time digital audience selection and delivery systems. This incompatibility effectively closes off revenue upside for unsold linear ad impressions.

These roadblocks to growth won't be solved by ad tech vendors who've moved R&D investment from solving legacy problems to high growth digital delivery.

cloverleafApi solution

Existing linear ad replacement systems won't meet emerging business requirements until they can communicate in real-time using common API endpoints typical of modern software.

cloverleafAPi would emulate the digital ad transaction flow with a group of restful APIs developed for compatibility with linear TV playout systems – Enabling ad decisions to be made by sellers in near real-time.

cloverleafApi will be architected using a modern *services* perspective and cloud deployment. Decision data is acquired in real-time, with only the minimal data needed for business continuity in memory.

CCMS endpoints would be created to speed the transition for small markets. This approach makes available the most valuable features of a structured API for small headends with no capital investment – Ensuring Interconnect continuity.

OpenSource License

Industry consolidation has materially changed the landscape for both business owners and vendors. With industry consolidation comes efficiency, that same efficiency dissuades vendors from new investment. Replacing a 30-year practice that impacts the entire ecosystem may require the Business owners to take the lead.

An OpenSource Mastodon license can help solve this issue of trust, allowing Business owners to fund implementing a standard while giving vendors an opportunity to create competitive variations and adaptations. Efficient for all parties.

Business Impact

CCMS text files		**cloverleafAPI proposal**
Fragile and inflexible, unchanged for 2 decades		Innovate without compromising legacy systems
Transaction success depends on people naming advertisements to trigger critical schedule merges and verification functions		Unique break IDs; eliminate errors & omissions while saving thousands of labor hours per year in traffic
Edits to CCMS files in transit are insecure, with minimal changelog		Transaction Security. No intermediate points of data injection, and detailed transaction logging
Real-time ad decisions are not practical with tens of thousands of text files per day		Real-time fulfillment and verification via restful APIs
CCMS merge of more than 2 schedules is impractical at scale		Supports many ad decision systems in the same avail or by daypart
Incompatible with digital ad systems		Connect legacy playout to digital ad scheduling and auction systems endpoints to sell more inventory
The butterfly effect requires every ad-seller to align on every transaction – millions per day, for interconnected markets		Every transaction is a unique event, cloverleafApi contains the impact of E & O to a single ad
CCMS text files		**cloverleafAPI proposal**

For more information contact us: jim@tradersabacus.com / bruce@maxamind.com

A change to break allocations requires every traffic system to update, republish schedules, and remerge		Shared view of today's inventory allows business owners to reallocate with automated optimization
		Uncouple interconnect zones in real time for national ad-impression campaigns, where the full market is creating waste
		Access new network inventory so every cuetone can be monetized

cloverleafApi program plan designed for Business Owners

- Built OpenSource; code owned and controlled by the business owners

    - Stage-1 estimate: $75K, 2-4 months
    - *Deliverables*: program roadmap and decision doc
        - Due diligence and program management by the cloverleafApi team
        - Document current workflows and existing business rules
        - Document Inventory of vendor capabilities and readiness for an API interface
        - Draft detailed architecture and design docs for review and approval
        - Phase-2 budget, and milestones plan

    - Stage-2 estimate: $300k - $800k, 3-6 months
    - *Deliverables*: cloverleafApi low capacity prototype
        - cloverleafApi for CCMS replacement
        - Cost is dependent on scope and code contributions by participating teams
        - Validate approach with a long-tail network
        - Support current business model, local & interconnect merge, real-time transaction support, using SCTE/BXF standards
        - Validate requirements for a production environment

    - Stage-3 estimate: $2.0m - $4.0m 4-12 months
    - *Deliverables*: production environment ready for full footprint transactions
        - Tools and environment capable of transacting US cable footprint @100m transactions per/day
        - Total cost dependant on contributions by participating MSO tech teams
        - SOW funding for key industry vendor integration to cloverleafApi using direct calls, no CCMS interpreter

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- Interface with the digital ecosystem for ad decisions
- Documented operating instructions, guidelines, and online training videos

OpenSource License and Operating costs

- Overview

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- OpenSource Mastodon license
  - https://github.com/mastodon/mastodon/blob/main/LICENSE
  - Any interested party could use cloverleafApi $0.00 license expense
  - Validated third-party development would be contributed back to the code base for everyone to use
  - Bugfix & Maintenance of the code provided by the cloverleafApi team, funded by the largest (6?) MSOs.
  - Feature Innovation and development coordinated by the cloverleafApi team with the primary MSOs.
  - Operating costs for cloud hosting and monitoring, design goal below 50cents per/head-net, per/month.
  - 24x7 Helpdesk by an existing industry service provider

cloverleafApi leadership team

- Bruce Dilger (Architect)
- Jim Sullivan (Strategy)
- Emily Sirianni (Project Management)