

Streaming of ATCS Monitor Prohibited

2018.04.02

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The following policy restatement derives from my own research and discussions with the ATCS Monitor author.

Policy

The Streaming of ATCS Monitor's Dispatcher Display in real-time, or near-real-time is illegal and thus a violation of the Terms of Service (TOS) regarding the use of ATCS Monitor. Violators will be dismissed from the ATCS Monitor group. Server aggregator managers are expected to block the IP of any client known to be engaged in such illegal streaming.

Background

ATCS Monitor operates by performing an over-the-air interception of private railroad communications known variously as ATCS, ARES and Genisys Radio Code Line, etc.... Since ATCS Monitor is based upon over-the-air interception, the information acquired falls under the U.S. Statutes and FCC regulations regarding electronic interception. It is important to understand that the originating railroad 'owns' the content and derivatives of the intercepted communications.

Specific Prohibition of Electronic Intercept

U.S. Statutes and FCC regulations specifically prohibit even the private interception of certain electronic signals. These are:

- 1) Telephone conversations,
- 2) Signals whose transported content is intentionally encrypted by the owning parties for protection,
- 3) Signals that are by nature of their modulation method 'spread' with pseudo-random sequences,
- 4) Signals that are by nature of their modulation method using any sort of progressive phase rotation.

ATCS Monitor is not any sort of telephony, does not use encryption, and relies upon simple FSK modulation which has a 1-to-1 relationship between the FSK signal and the decoded binary data, and therefore does not fall under these prohibitions.

Exception for Readily Available Scanners

Prohibition against rebroadcast only applies to communications which are not readily available to the general public with easily obtained off-the-shelf equipment requiring no special knowledge.

This practice established by court precedent allows the rebroadcast of scanner traffic such as is provided by Railroad Radio Net, Broadcastify and others to stream dispatcher and train crew voice transmissions. It also allows the audio of a scanner to be heard in a public-access situation such as a hobby store, museum, or rail-park. Because anybody can buy a scanner and listen in easily enough – it is unrealistic for the communications owner to have any reasonable expectation of privacy – they are therefore offered no protection.

ATCS Monitor is not quite that simple. ATCS Monitor uses equipment which requires modification and some degree of special knowledge

Human Readable

Prohibition against rebroadcast only affects information which is deemed “human readable” (again an artifact of court case precedent).

This is the point which differentiates the bare ATCS Monitor data relay from the streaming of the ATCS Monitor Dispatcher Display. ATCS Monitor deals with two displays. The generic ATCS Monitor window has 3 parts which contain scrolling decoded data:

- 1) Main Window
- 2) Active MCP Window
- 3) Packet Display Window

The decoded ATCS data displayed in these windows is NOT considered “human readable”. The data is rather cryptic and would require the user to know what ‘K12’ or ‘C37’ means, or in the packet window what a mnemonically decoded string such as ‘Mnemonics=1NWK,2NWK,1LZK, 2LZK,1TK,1EAK,1BK,K61’ means.

The underlying packets of decoded but hexadecimally represented data are even further removed from “human readability”.

Aggregating Servers Allowed

The many aggregating servers of ATCS data for ‘Territory Kits’ rely upon this “not human readable” determination to legally serve (rebroadcast) data to their clients.

Dispatcher Display is Human Readable

However, when the intercepted data is aggregated and assigned to a Dispatcher Display it has become “human readable”. The Dispatcher Display is for all practical purposes, essentially the intended information display mimicking what the owning railroad’s dispatcher views on a CTC panel. This view contains sensitive railroad owned proprietary intelligence revealing real-time system situation and context. As such the owning railroads and the US government consider it important to protect this information within existing law.

Finding

The US Dept of Justice has made a determination that the ATCS Monitor Dispatcher Display, is a “human-readable” product derived from over-the-air interception of electronic data and may not be rebroadcast.

The author of ATCS Monitor is in concurrence with this finding.

Pursuant to this, streaming of the ATCS Monitor Dispatcher Display is prohibited.

Streaming

Streaming is the real-time, near-real-time (delayed), or near-real-time-lapse-capture or frequent snapshotting of the Dispatcher Display to be made available via the internet for viewing.

Individual Philosophy of ATCS Monitor

ATCS Monitor is expressly provided for individual monitoring. Individual monitoring implies the user has an instance of ATCS Monitor running on their PC and can only be viewed at that PC.

Smartphone Remote Monitoring

An individual ATCS Monitor user may view their individual PC remotely using an application such as TeamViewer™, but they are not to share such an access with others. TeamViewer™ and its like, are considered a 'remote display utility' of the PC being accessed and are not intended as multi-user access venues. This differentiates TeamViewer™ type utilities from the more general Web Presence endeavors. Though untested, we believe this difference would stand in favor of individual remote viewing as described.

Password Secured Web Presence

Web presences are accessed by general browsers, applications such as YouTube™ or other streaming media applications and services. Regardless of the security surrounding such access, court precedent has determined that these general presence offerings are 'broadcasts' even if they are by membership or subscription only or password protected. Therefore, offering a web presence of the Dispatcher Display even for only your own private access is a rebroadcast and is therefore prohibited.

What about Flight Aware™

Apples and Oranges. The legal environment of FlightAware™ and ADSBExchange, etal... are based upon open international standards and treaty spectrum in which there is no 'owner' of the communications. This is not at all the same as ATCS Monitor. Each must be considered in its own legal environment. They have their legal hurdles and considerations, we have ours.

Public Displays of ATCS Monitor

Public displays such as museums, rail-parks, hobby stores, and train-shows fall under other aspects of law which allow for incidental use of intercepted information in art, education, freedom of expression, and freedom of the press – all of which combined provide a legal shelter for the practice of building the hobby as an artform ☺. As such, public display are allowed.

It's Only a Hobby

In all things maintain the practice of 'good-will' with the railroads. It is their 'business' and for us it is only a 'hobby'.