

# THE TELOS ALLIANCE™



(주)미디어큐브  
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# “Undo”

## The new way of audio processing

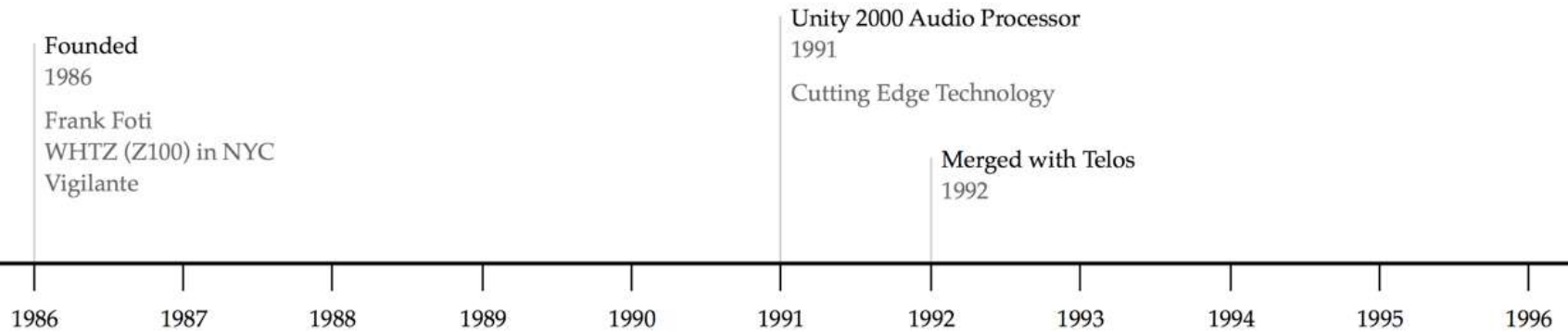
Daniel Wang

Omnia Audio

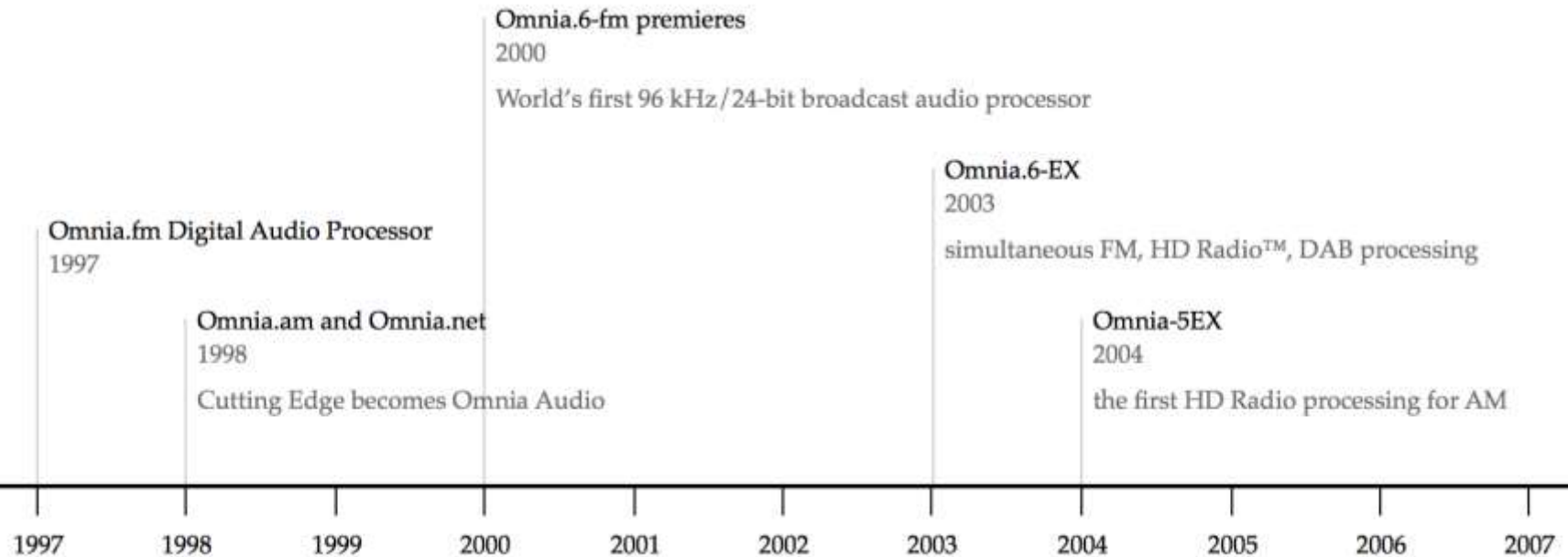
[daniel.wang@telosalliance.com](mailto:daniel.wang@telosalliance.com)



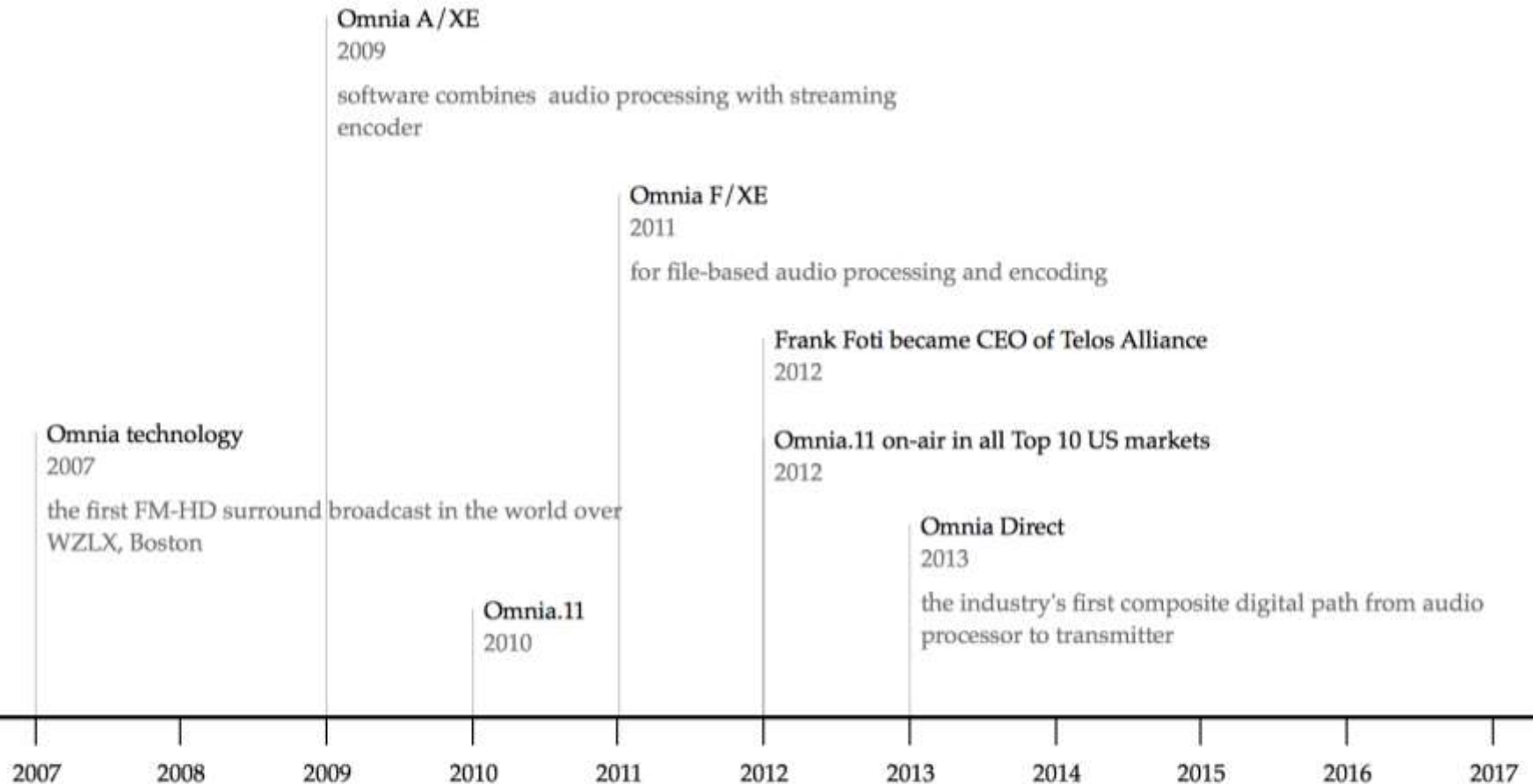
# History



# History



# History



Now

Over 800 Omnia.1 1

Now

Over 1100 Omnia.9

Now

Over 10,000 Omnia ONE



# Omnia's Invention

- The Dividend Composite Filter
- Non-aliasing DSP clipper
- Dynamically flat time-aligned crossovers
- Low-IMD clipping
- Multi-band look-ahead limiting
- Integrated FM and HD processing
- “Undo” de-clipper and multiband expander
- Psychoacoustic composite embedder  
(up to 140% audio peaks at 100% total modulation)
- Complete one-box solution encompassing FM, HD, streaming processing/encoding, and RDS
- Omnia Direct: First direct digital processor-to-transmitter link

# Omnia's Invention

Omnia Audio is CURRENTLY involved in a campaign to confirm that **SSBSC** (single sideband suppressed carrier) FM stereo will, in many cases, drastically reduce multipath distortion around tall buildings and terrain variations.

Both Omnia.11 and Omnia.9 have this technology already on board.

# Undo

## Why we need Undo?

# Loudness War

- 1985, Dire Straits' "Money for Nothing"

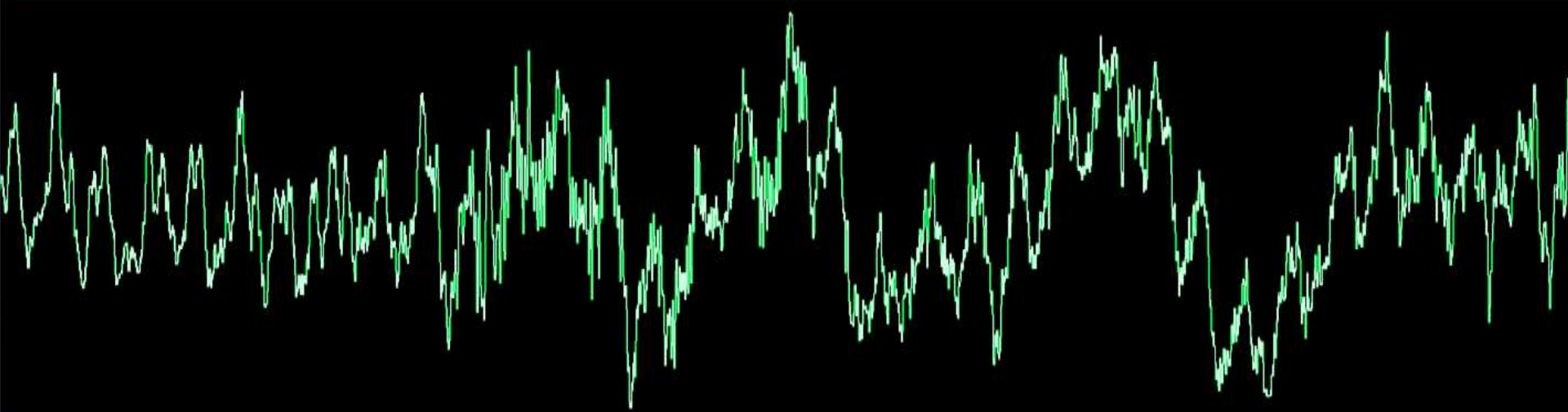
Program Input - Left



# Loudness War

- 1995, Alanis Morissette's "Ironic"

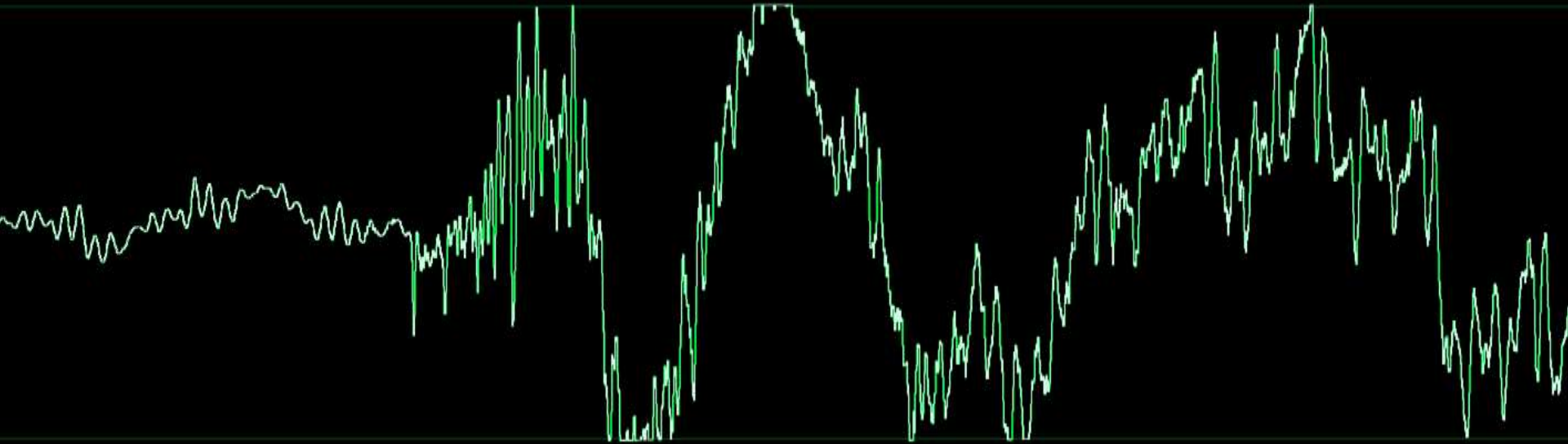
Program Input - Left



# Loudness War

- 1999, Red Hot Chili Peppers' "Californication"

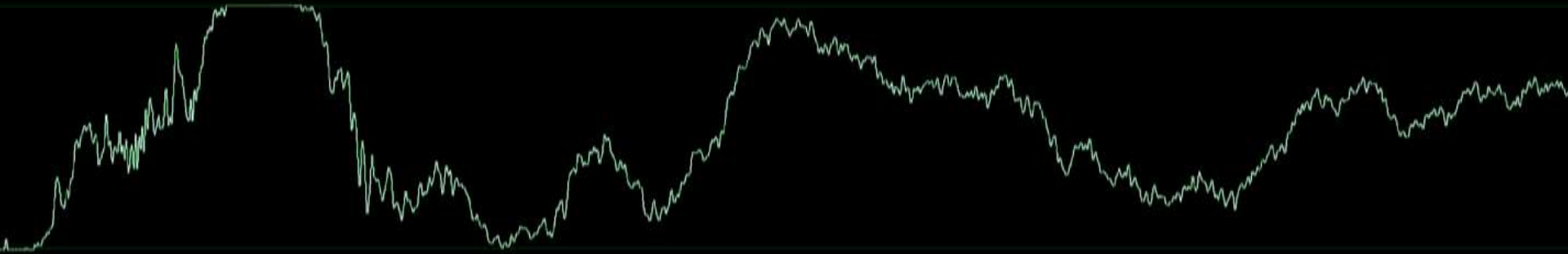
Program Input - Left



# Loudness War

- 2003, Green Day's "Wake Me Up When September Ends"

Program Book 1/08



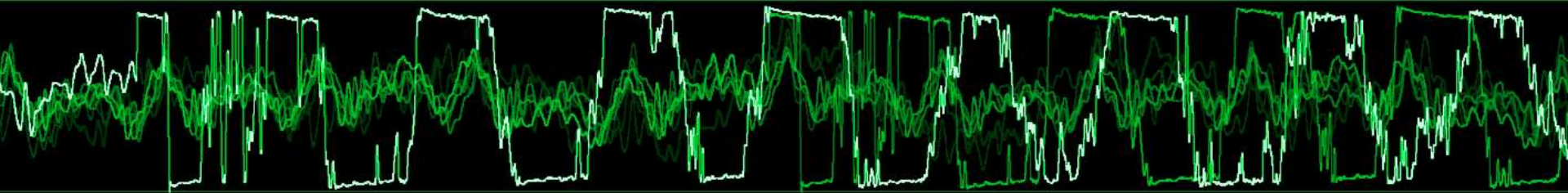
# Undo

- de-clipper
- multiband expander

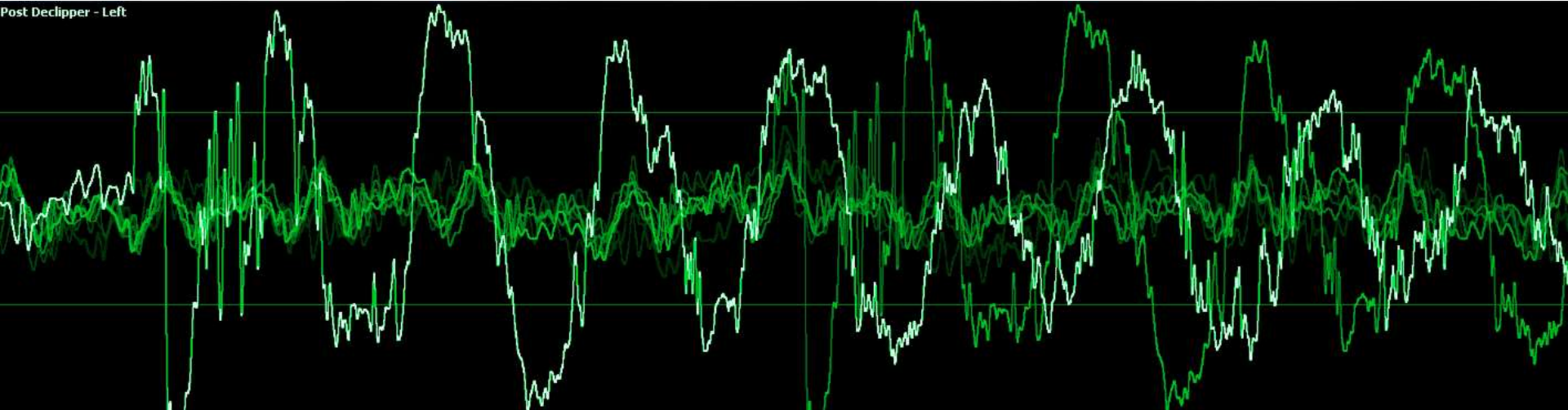


# de-clipper

Pre Declipper - Left

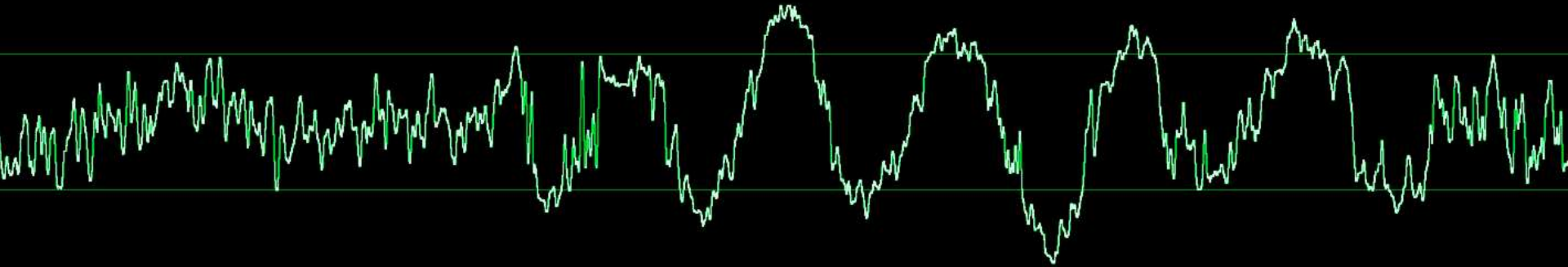


Post Declipper - Left

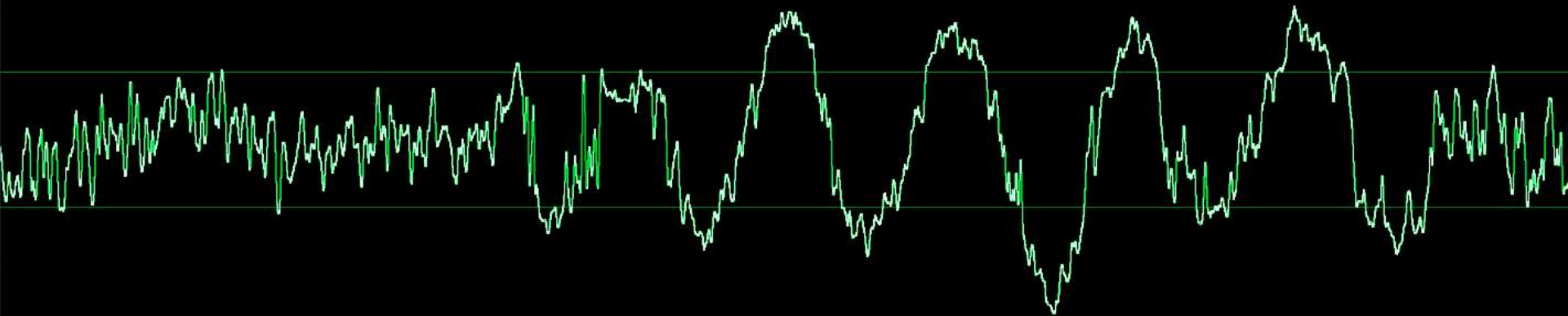


# multiband expander

Post Declipper - Left



Undo Output - Left



demo

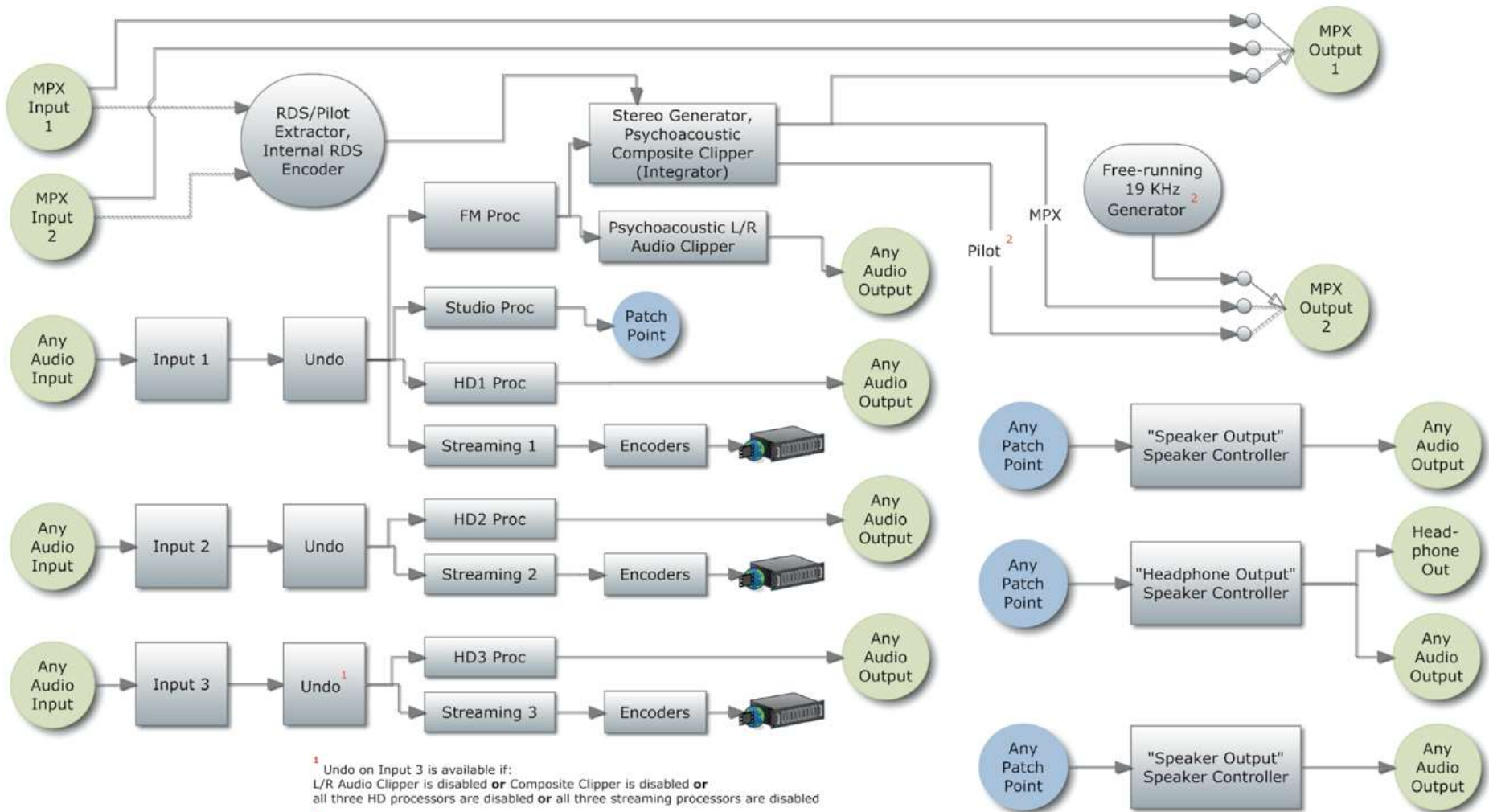
Omnia.9

The swiss knife of audio processor

# RF bandwidth Control

# Auto Pilot

# Block Diagram



<sup>1</sup> Undo on Input 3 is available if:  
 L/R Audio Clipper is disabled **or** Composite Clipper is disabled **or**  
 all three HD processors are disabled **or** all three streaming processors are disabled

<sup>2</sup> If using an external RDS coder, make sure to set MPX Output 2 to "19 KHz Generator",  
 and feed that to the RDS encoders Pilot input.

# Workflow |





demo

Omnia.9

the most **secure** audio processor ev

# Main / Backup Input auto-switch

Customise switch condition and timing

# Internal Playback

FTP upload contents

Station ID Insertion

# Dual Power Supply

Alarm

Hot-swappable

# Relay Bypass

for all Analog, Digital, MPX I/O