



AI and Cloud Technology in Radio

Presented on January 29, 2025
to SBE Chapter 40 San Francisco
by Andrew Scaglione

Why Cloud-Native?

- **Increase efficiency and productivity**
- **Microservices running in containers are scalable and can be turned on and off as needed**
- **Save money on hardware, capital expenses and operating expenses**



Traditional Playout Pain Points

Expensive initial hardware & software costs

Repetitive manual updates to software

System interconnection between locations

Minimal localization must be done manually

More features requires more complex hardware

Radio.Cloud Solutions

Save up to 90% on hardware; sustainability

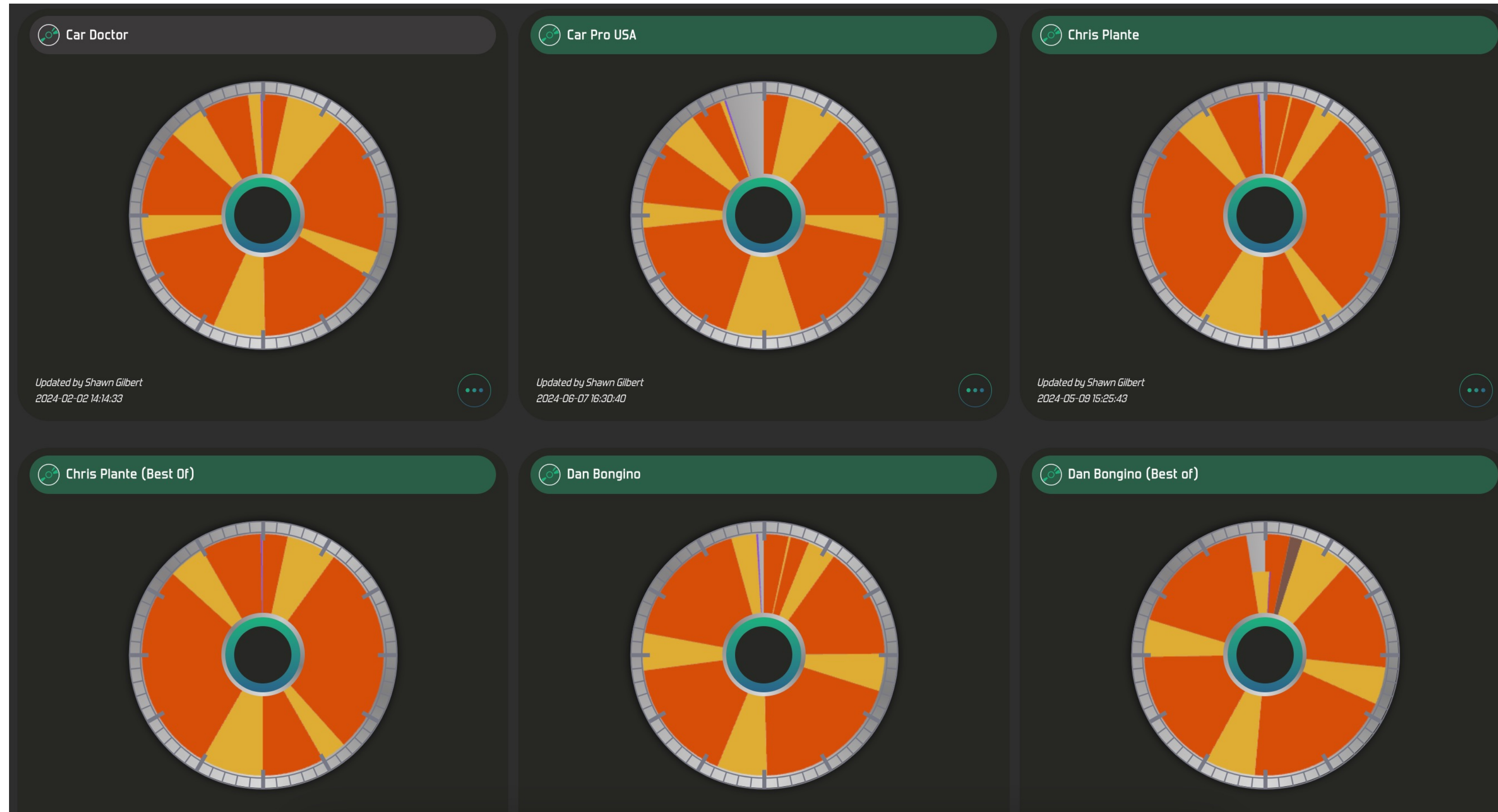
Automatic updates through the cloud

Locations connected through the cloud

Up to 5x more localization each hour

Heavy lifting of complex features done in cloud

Cloud-Native Case Studies




KYST-AM: all equipment at transmitter site,
stayed on air during Hurricane Beryl

Cloud-Native Case Studies



KSJO-FM: downsizing and moving buildings

Cloud-Native Case Studies



Dashboard ▾Audio Browser ▾Playlists ▾Broadcast Clock ▾Voice Tracking ▾Live Studio ▾Admin ▾WEPN-FM/TJ 98.7 ▾N: TJ 98.7 ▾

01:22:21 PM
EDTLogout

Local Playlist

Jump to hour

000102030405060708091011121314151617181920212223

RC Test StreamOfficial Stream

Create PlaylistPending Playlist

Search...

Mon 09-09-2024

	START TIME	DURATION	L-ID	ARTIST	TITLE	TAGS	ACTIONS	TRANSITION
13	09-09-2024 Version 8 Compare Music Clock Music: 3035s (88%) Other: 426s (12%) Generated At: 2024-09-09 12:50:41							
	13:14:43	00:00	618	Music Kickoff	Fun n Favs JK 2 Dry FX	-		
	13:14:44	02:53	282	Post Malone Featuring Morgan Wallen	RAMP: 15s I Had Some Help	Power Curre...		
	13:17:37	00:00	493	Sweeper	DRY Pop Up Until Were Not	-		
	13:17:37	04:15	186	No Doubt	RAMP: 6s Don't Speak	Regular Gold		
	13:21:52	00:19	506	Sweeper	TJSHOW CHAR DEV 2	-		
	13:22:12	04:26	258	The Verve 00:00:05.5	RAMP: 32s Bittersweet Symphony	Power Gold - 00:04:20.5		
	13:26:38	00:09	455	TJ Show Promo Sweep	SteveK4	-		
	13:26:47	02:39	281	Katy Perry	RAMP: 7s Woman's World	Regular Cur...		
	13:29:27	00:00	625	Music Kickoff	This Is TJ987 SK 2 Dry	-		
	13:29:27	02:47	284	Shaboozey	RAMP: 12s A Bar Song (Topsy)	Power Curre...		
	13:32:14	00:03	413	TJ Station ID Sweeper	2	-		
	13:32:17	03:11	245	The All-American Rejects	RAMP: 15s Dirty Little Secret	Regular Gold		
	13:35:29	00:18	510	Sweeper	TJSHOW CHAR DEV 4	-		
	13:35:47	00:29	US_PABR-006500	PFIZER US_PABR	0065000	-		A A
	13:36:17	00:30	US_PTNE-000300	PRIMATENE US_PTNE	0003000	-		A A
	13:36:47	00:30	US_YWDO-204500	WENDY'S US_YWDO	2045000	-		A A
	13:37:17	00:29	US_FH-GARR-3050	GARLIQUE US_FH	GARR-30500	-		A A
	13:37:47	00:29	US_BAAM-167510	BANK OF AMERICA US_BAAM	1675100	-		A A

WEPN-FM: five days to get a station on air, two weeks to flip formats and train the new staff

Cloud-Native Case Studies

Discarded Time
14 Profiles

15:19:38
14 Clients

Special Mode Active

+ New Newscast

+ New Newscast

Christian Brenner
RED0099

SKYYVIEW
NETWORKS

Newsclouds

Christian Brenner
05/29/24

10:00
RED0099

03

10:00
RED0099

02

08:00
RED0099

06

08:00
RED0099

05

Dimas Permane
05/29/24

08:00
MOBILE-

04

07:00
MOBILE-

13

Christian Brenner
05/29/24

07:00
RED0099

12

07:00
RED0099

11

07:00
RED0099

10

07:00
RED0099

09

Dimas Permane

Stories

+ Expand

00:04

01. Opener KSFN

OKSFO

It's three P M and this is five sixty K S F O - with the AP Newscast.

07:00 V8

00:04

02. Opener KABC (Los Angeles, CA)

OKABC

Seven ninety K A B C with the Top-Of-The-Hour news: live from A P.

07:00 V8

00:04

03. Opener KSTV (Houston, TX) Texas First

OKSTV

This is A P News on Patriot Talk Houston, with A P News from Texas - and the World.

07:00 V8

00:03

04. Opener General 01 with daypart and time

OGen1

Good afternoon, it's three o'clock and here are the news from AP.

07:00 V8

00:16

05. US National

USN

President Biden and VP Harris have launched a Black voter outreach today. This effort comes amid signs of diminished...

07:00 V8

00:19

06. US National

USN

A key Republican has called for increased defense spending today to counter adversaries. The proposal suggests a...

07:00 V8

00:17

07. US National

USN

South Africans have begun voting today in their most crucial election in thirty years. The election will determine the country's...

07:00 V8

00:12

08. State News: California

CA

The Giants have won 1-0 against the Phillies in ten innings. Luis Matos hit a walk-off sacrifice fly. Giants relievers kept the...

07:00 V8

00:15

09. State News: Texas

TX

U.S. Rep. Tony Gonzales has won the GOP runoff in Texas today. He faced a strong challenge from a gun-rights activist....

07:00 V8

00:13

10. State News: Florida

FL

The Rangers have dropped Game Four of the East Finals tonight. Despite Shesterkin's dominant performance, they couldn't...

07:00 V8

00:16

11. State News: New York

NY

The Washington Post has held the Alito flag story for three years. The story concerns Justice Alito's involvement in a...

07:00 V8

00:14

12. State News: Arizona

AZ

The AHL's Roadrunners have voted to stay in Tucson for thirty games next season. This decision was made during a meeting...

07:00 V8

00:04

13. Opener Dual State OH+PA

OOHPA

Good afternoon, here are the news from the world, the U S, Ohio and Pennsylvania.

07:00 V9

News Profiles

Search Affiliate / Call Letter

US National World + California (KSFO, CA)

OKSFO

USN

USN

USN

CA

01:09.9

00:03.6

00:52

US National World / neutral 5 stories

1

01:35

US National World / neutral 5 stories / w/ Jingle+Stinger

1

01:08

US National World + Texas

1

01:05

US National World + California

1

01:09

US National World + New York

1

01:05

US National World + Florida

1

01:07

US National World + Arizona

1

01:09

US National World + California (KSFO, CA)

1

01:09

US National World + California (KABC, CA)

1

01:12

US National World + Texas first KYST

1

01:14

US National World + Tennessee

1

01:12

US National World + Ohio

1

01:15

US National World + Pennsylvania

1

NewsCloud: customized/localized newscasts at scale

What's the Common Factor?

- Amazon Web Services
- AWS Lambda & serverless computing
- Scalable, cost-effective and fast

The AWS logo, consisting of the letters 'aws' in a sans-serif font with a curved orange arrow underneath.

PARTNER

AWS Availability Regions & Zones



32 worldwide regions, each with 3-6 availability zones

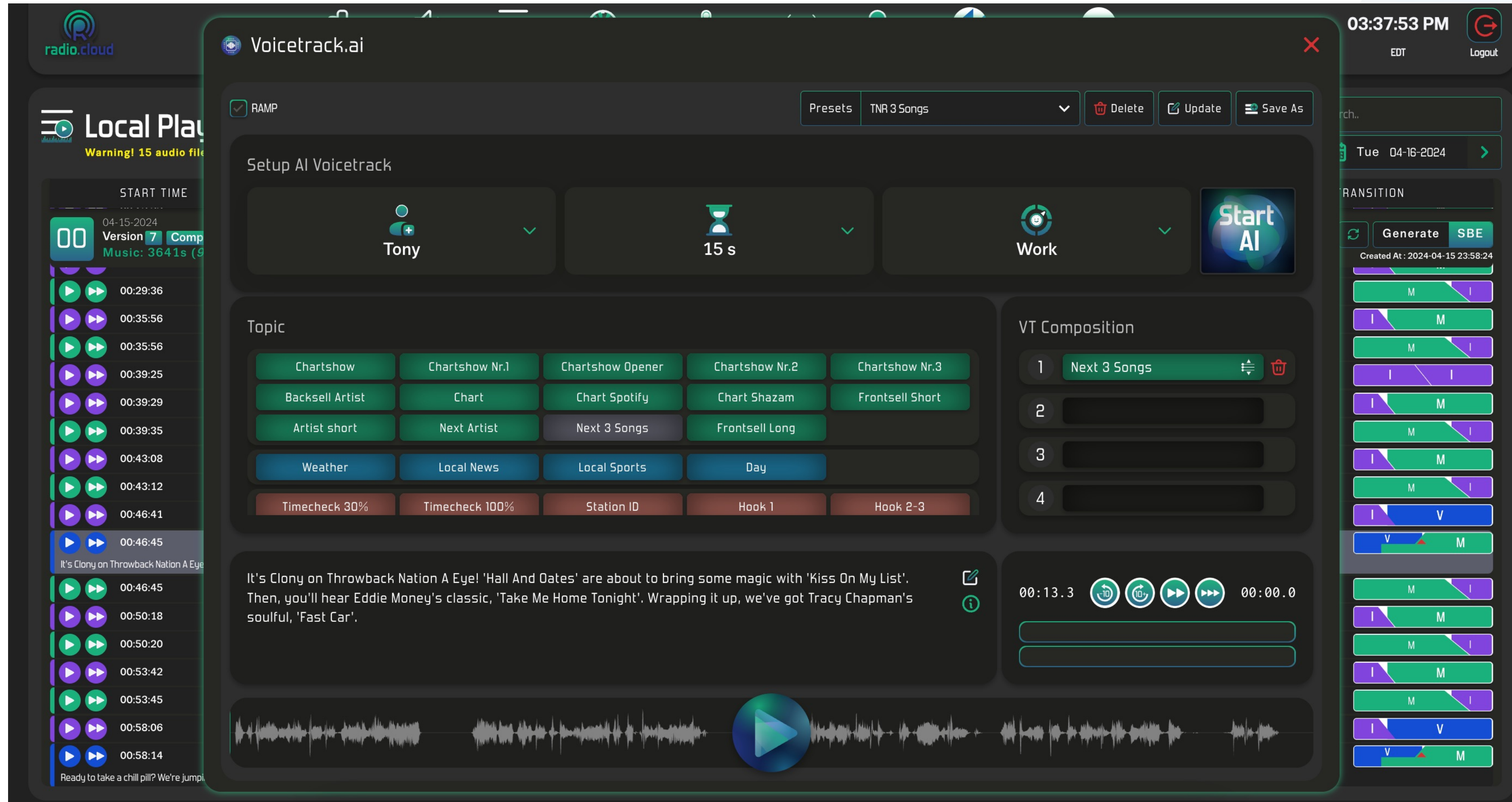
This allows for maximum redundancy and security of your data

Switching Gears to AI

- Adaptive AI driven voice tracking
- Chat GPT-4o and beyond
- Best uses for AI? As an Assistant




































AI Case Studies



Voicetrack.ai: empowering programmers worldwide

AI Case Studies

Network		Galaxy Ingolstadt
 00:00 Radio Galaxy Wetter INTRO		 00:00 Radio Galaxy Wetter INTRO 
 00:03 Wetter		 00:03 Wetter 
 00:13 Radio Galaxy Nachrichten I...		 00:13 Radio Galaxy Nachrichten I... localized 
 00:17 Lokalnews		 00:18 Lokalnews 
 02:07 Radio Galaxy Verkehr INTRO		 02:08 Radio Galaxy Verkehr INTRO 
 02:09 Verkehr		 02:10 Verkehr 
 02:19 Commercial Break 1		 02:20 Commercial Break 1 
 02:20 AI CHARTS N1 Opener		 02:21 AI CHARTS ING OPENER localized 
 02:42 Voicetrack.AI HH:00: [GLX ...		 02:43 Voicetrack.AI HH:00: [GLX ... 
 02:42 Title 1		 02:43 Title 1 
 05:32 AI CHARTS N1 Ranking		 05:33 AI CHARTS ING RANKING localized 

Chartshow	Chartshow Nr.1	Chartshow Opener	Chartshow Nr.2	Chartshow Nr.3
Backsell Artist	Chart	Chart Spotify	Chart Shazam	Frontsell Short
Artist short	Next Artist	Next 3 Songs	Frontsell Long	

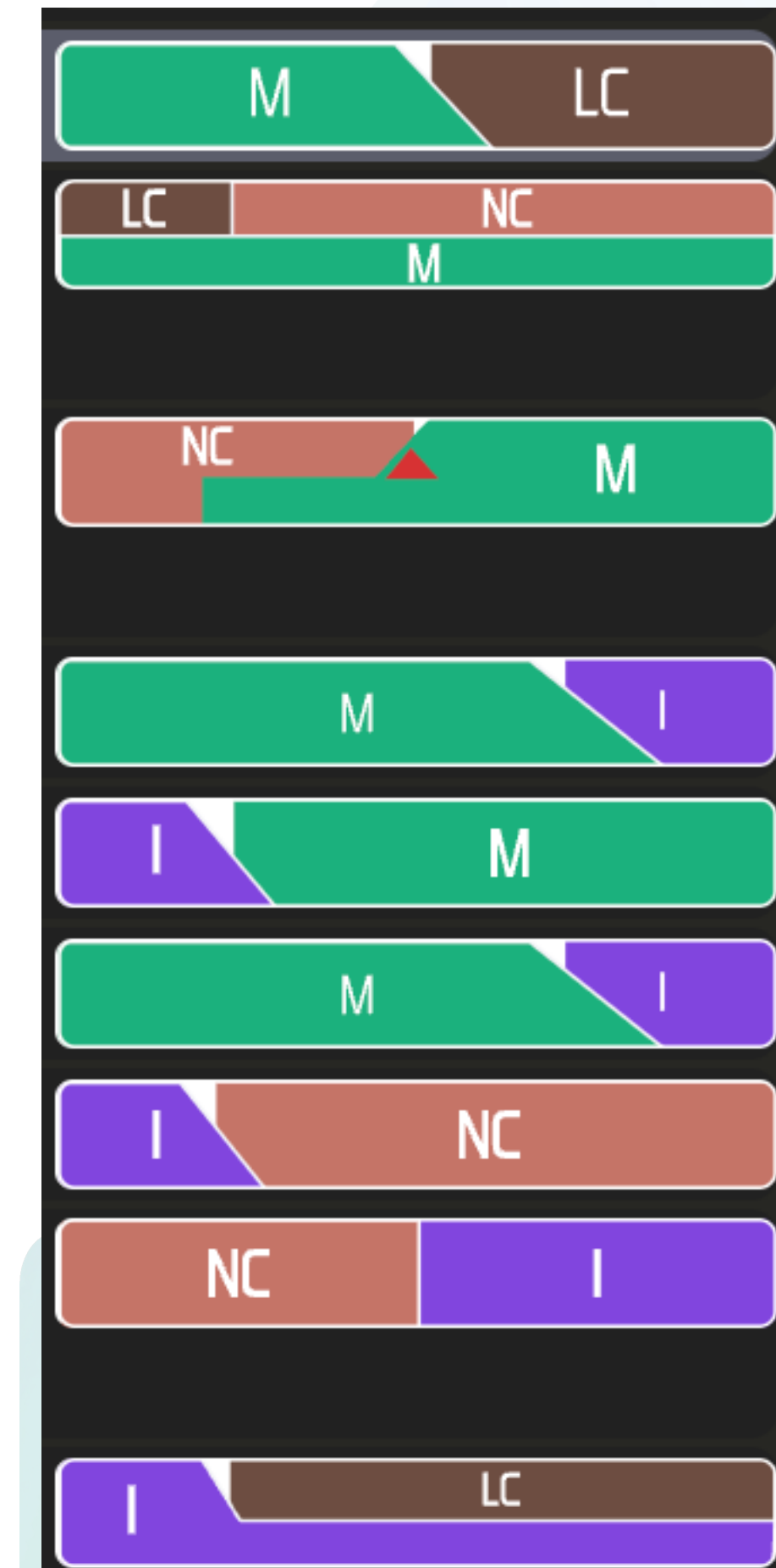
Hyper-localized chart shows produced and hosted by AI

AI Case Studies

	START TIME	DURATION	L-ID	ARTIST		TITLE	TAGS	ACTIONS	TRANSITION
<div>2025-01-08</div> <div><div>18</div><div>Version 11 Compare LOOP - AI Anni 18</div><div>Music: 48:45 (72%) Other: 18:38 (28%) Difference: 07:23</div></div> <div><div><div>Generate</div><div>HEL</div></div><div>Created At : 2025-01-08 17:52:38</div></div>									
	18:00:07	02:21	1001130944	Costi	<div>RAMP: 8s</div>	Vaisto (feat. Juuna Chill)	-		<div>M</div>
	18:02:28	00:03	1001182381	Tuotanto Loop Ramp		Ramp A 120sec	-		<div>I</div>
	18:02:31	00:10		Voicetrack.AI Sanoma Finnland Satu B Version	<div>Loop Back + 2 ...</div>	08.01.25 18:01 RAMP	-		<div>V</div>
Siinä Kosti: Vaisto mukana Juuna Chill. Seuraavaksi soi Ariana Granden "One Last Time". Sen jälkeen vuorossa "Kid Laroi" featuring Justin Bieber ja 'Stay'.									
	18:02:42	00:01	1001219468	Tuotanto Loop Liner		Loop ID 16	-		<div>I</div>
	18:02:43	03:12	304843	Ariana Grande	<div>RAMP: 8s</div>	One Last Time	-		<div>M</div>
	18:05:56	00:01	1000098917	Tuotanto Loop Liner C		Loop ID 05 Parhaat	-		<div>I</div>
	18:05:58	02:15	1000297565	Kid Laroi	<div>RAMP: 11s</div>	Stay feat. Justin Bieber	-		<div>M</div>
	18:08:13	00:00		Voicetrack.AI	<div>Loop Back 2 B...</div>	08.01.25 18:03 RAMP	-		<div>V</div>
	18:08:13	02:55	1001014245	Ege Zulu	<div>RAMP: 9s</div>	Tunnista tuntiin feat. BEHM	-		<div>M</div>
	18:11:08	00:01	1001219470	Tuotanto Loop Liner		Loop ID 18	-		<div>I</div>
	18:11:10	02:39	1001231129	Gracie Abrams		That's So True	-		<div>M</div>
	18:13:49	00:02		Voicetrack.AI Sanoma Finnland Satu B Version	<div>Loop Back Artist</div>	08.01.25 18:00 RAMP	-		<div>V</div>
Siinä "Gracie Abrams": "THAT'S So True".									
	18:13:51	00:02	1001186787	Tuotanto Loop Ramp		Ramp J 90sec	-		<div>I</div>
	18:13:53	00:03		Voicetrack.AI Sanoma Finnland Satu B Version	<div>Loop Hook 1</div>	08.01.25 18:04 RAMP	-		<div>V</div>
Hetken kuluttua Loopilla musiikissa olis tulossa "The Weeknd"!									

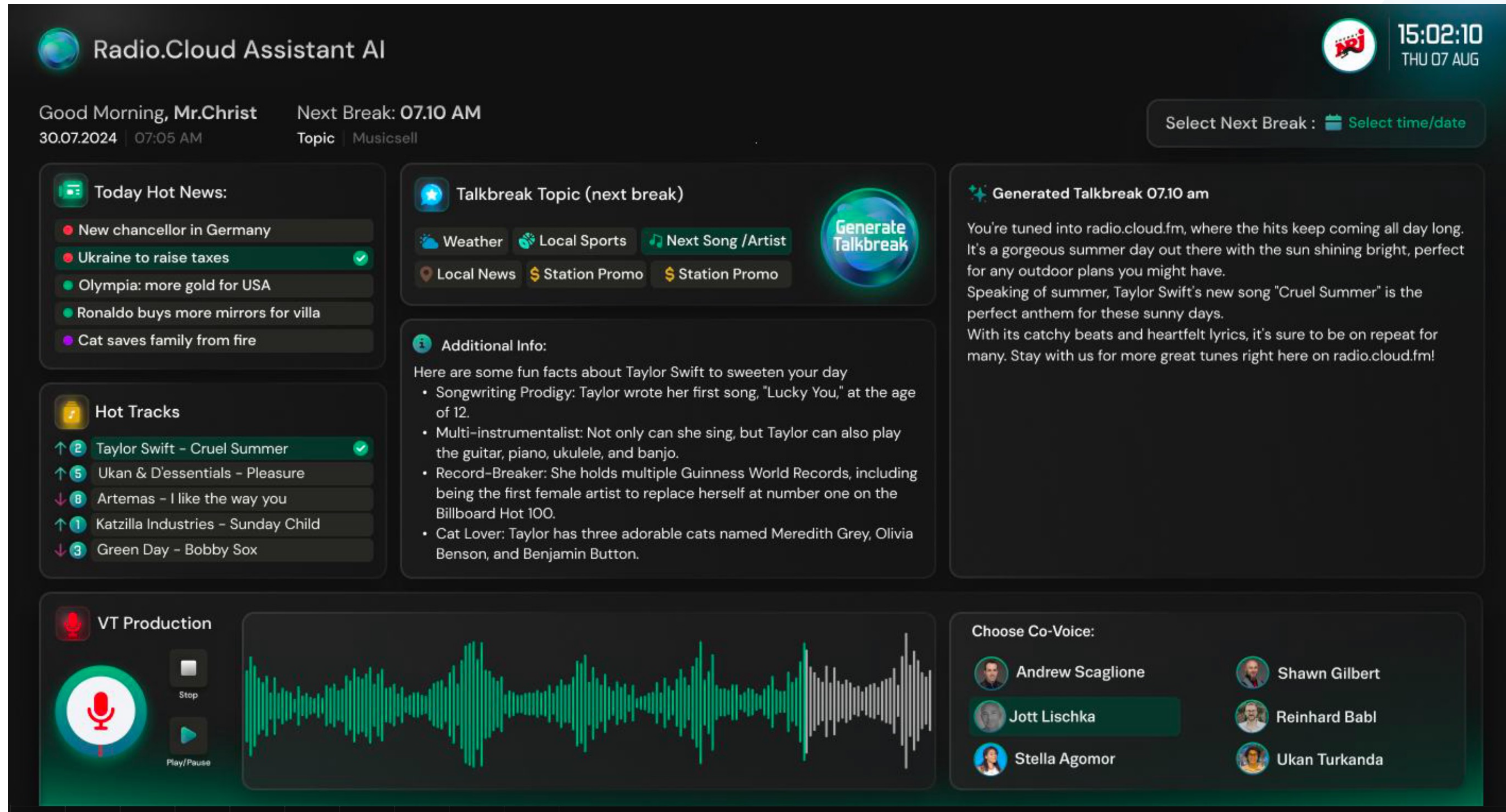
Sanoma Media in Finland running daily four-hour drive time shift on a national FM station, customized, produced and hosted by AI

AI Case Studies



AI driven automatic mixing & segues

AI Case Studies




The screenshot displays the 'Radio.Cloud Assistant AI' interface. At the top left, the 'radio.cloud' logo is visible. The main header area shows the user 'Good Morning, Mr.Christ' with a timestamp of '30.07.2024 | 07:05 AM' and the 'Next Break: 07.10 AM' with the topic 'Musicsell'. A 'Select Next Break' button with a calendar icon and the text 'Select time/date' is located on the right. The interface is divided into several sections: 'Today Hot News' with a list of news items (e.g., 'New chancellor in Germany', 'Ukraine to raise taxes'), 'Hot Tracks' with a list of songs (e.g., 'Taylor Swift - Cruel Summer', 'Ukan & D'essentials - Pleasure'), 'Talkbreak Topic (next break)' with options like 'Weather', 'Local Sports', and 'Next Song /Artist', and 'Generated Talkbreak 07.10 am' with a paragraph of text. At the bottom, there is a 'VT Production' section with a microphone icon and a 'Play/Pause' button, and a 'Choose Co-Voice' section with a grid of voice options (e.g., 'Andrew Scaglione', 'Shawn Gilbert'). A large green waveform is displayed in the center of the bottom section.

Radio.Cloud Assistant AI

Good Morning, Mr.Christ
30.07.2024 | 07:05 AM

Next Break: 07.10 AM
Topic | Musicsell

Select Next Break :  Select time/date




Today Hot News:




- New chancellor in Germany
- Ukraine to raise taxes ✓
- Olympia: more gold for USA
- Ronaldo buys more mirrors for villa
- Cat saves family from fire

Hot Tracks

- 2 Taylor Swift - Cruel Summer ✓
- 5 Ukan & D'essentials - Pleasure
- 8 Artemas - I like the way you
- 1 Katzilla Industries - Sunday Child
- 3 Green Day - Bobby Sox

Talkbreak Topic (next break)

 Weather  Local Sports  Next Song /Artist

 Local News  Station Promo  Station Promo

Generate Talkbreak

Generated Talkbreak 07.10 am




You're tuned into radio.cloud.fm, where the hits keep coming all day long. It's a gorgeous summer day out there with the sun shining bright, perfect for any outdoor plans you might have. Speaking of summer, Taylor Swift's new song "Cruel Summer" is the perfect anthem for these sunny days. With its catchy beats and heartfelt lyrics, it's sure to be on repeat for many. Stay with us for more great tunes right here on radio.cloud.fm!

Additional Info:







Here are some fun facts about Taylor Swift to sweeten your day

- Songwriting Prodigy: Taylor wrote her first song, "Lucky You," at the age of 12.
- Multi-instrumentalist: Not only can she sing, but Taylor can also play the guitar, piano, ukulele, and banjo.
- Record-Breaker: She holds multiple Guinness World Records, including being the first female artist to replace herself at number one on the Billboard Hot 100.
- Cat Lover: Taylor has three adorable cats named Meredith Grey, Olivia Benson, and Benjamin Button.

VT Production

  Stop  Play/Pause

Choose Co-Voice:

 Andrew Scaglione	 Shawn Gilbert
 Jott Lischka	 Reinhard Babl
 Stella Agomor	 Ukan Turkanda

Assistant AI: prep and research done for hosts

Bonus AI Idea

- Train your own GPT (Generative Pre-Trained Transformer) to improve station/company efficiency
- Using instruction (guidelines/prompts), knowledge (supporting documentation) and capabilities (AI is excellent at data sourcing, analysis and summarization)
- Plug in listener metrics, sales data, marketing campaigns, or even hardware/architectural diagrams
- Output over time will be an assistant that knows your station better than you do and saves you time on analyzing efficiencies

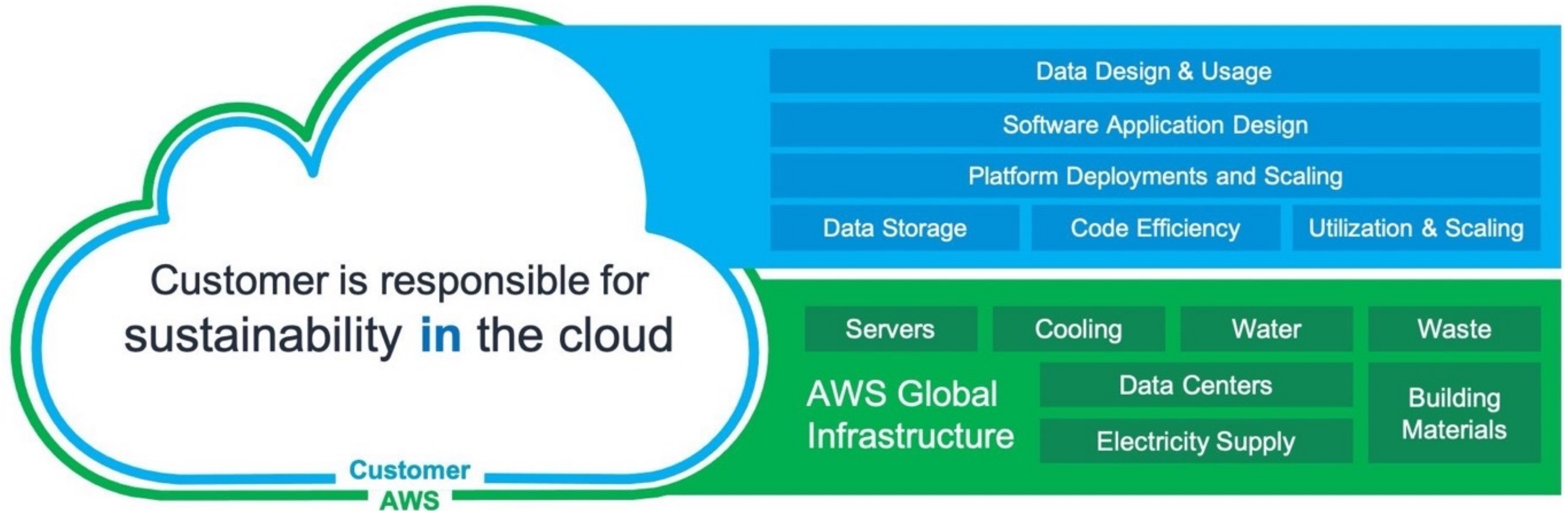


radio.cloud

Sustainability

- Reduced hardware footprint
- Scalable (“renting” AWS servers)
- Electric bills go down, on-site maintenance decreases

Sustainability



AWS is responsible for sustainability **of** the cloud

Moving to a Cloud-Based Operating System...

- Provides global reliability, flexibility, scalability & security
- Gives you an ever-evolving software, meaning you always have the newest version with no additional work on your side
- Introduces possibilities for downsizing hardware and studio space that were previously doable, but not nearly as simple to achieve

Questions?



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