Application-oriented Television Broadcasting

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TV 3.0 Project - Application Coding

- Phase 1: Call for proposals (2020-21)
  - 44 Application Coding requirements
- Phase 2: 6 proposals were received (2022)
  - 3 proposals adopted, addressing only 8 requirements:
    - 3D object-based audio interaction - MPEG-H Audio – Fraunhofer IIS
    - Sensory effects, multiuser identification and interaction, voice, gesture and multimodal interactions - NCL 4.0 – Fluminense Federal University (UFF)
    - Virtual Reality / 360 interactive scenes - NCL360 – CEFET-RJ

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TV 3.0 Project – Application Coding Phase 3

- SBTVD Forum agreed on a prioritized list of requirements for research and development by Academia
- 40 researchers from 6 institutions
  - UFJF, UFF, UFMA, CEFET-RJ, PUC-Rio, UFPB
- Workplan included:
  - Goal 6: studies, prototypes for addressing requirement gaps
  - Goal 8: development of use case apps, end-to-end demo
- Phase 3 finished in September 2024

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TV 3.0 Application-oriented Platform

- Application coding specifications for terrestrial digital TV have been centered on middleware standardization (backend, APIs, presentation engines).
- The distinct needs of TV 3.0 mandate an evolution from a middleware specification to a comprehensive software platform specification.
- A platform specification expands the focus to include both backend middleware services and front-end components and requirements on graphical interfaces.

TV 3.0 Application-oriented Platform:

- DTV+ platform establishes a standardized “application-oriented TV broadcasting” paradigm.
- The primary motivation behind this approach extends beyond simple harmonization with smart device systems.
- It enables viewer profiles, personalization and privacy management since the beginning of viewers’ journey.
- Content sources and delivery methods become transparent
- It has the potential to facilitate deployment of future technological evolution

DTV+ Application-oriented Platform

- DTV+ shifts the entry point from channel selection to broadcaster's initial-application selection
- DTV+ aggregates the various services, metadata, content and their sources, announced individually by each broadcaster
  - Over the air signaling may provide alternative Internet delivery of content and metadata
- Technical standards do not specify the graphical user interface design, but UI requirements

DTV+ Application-oriented Platform

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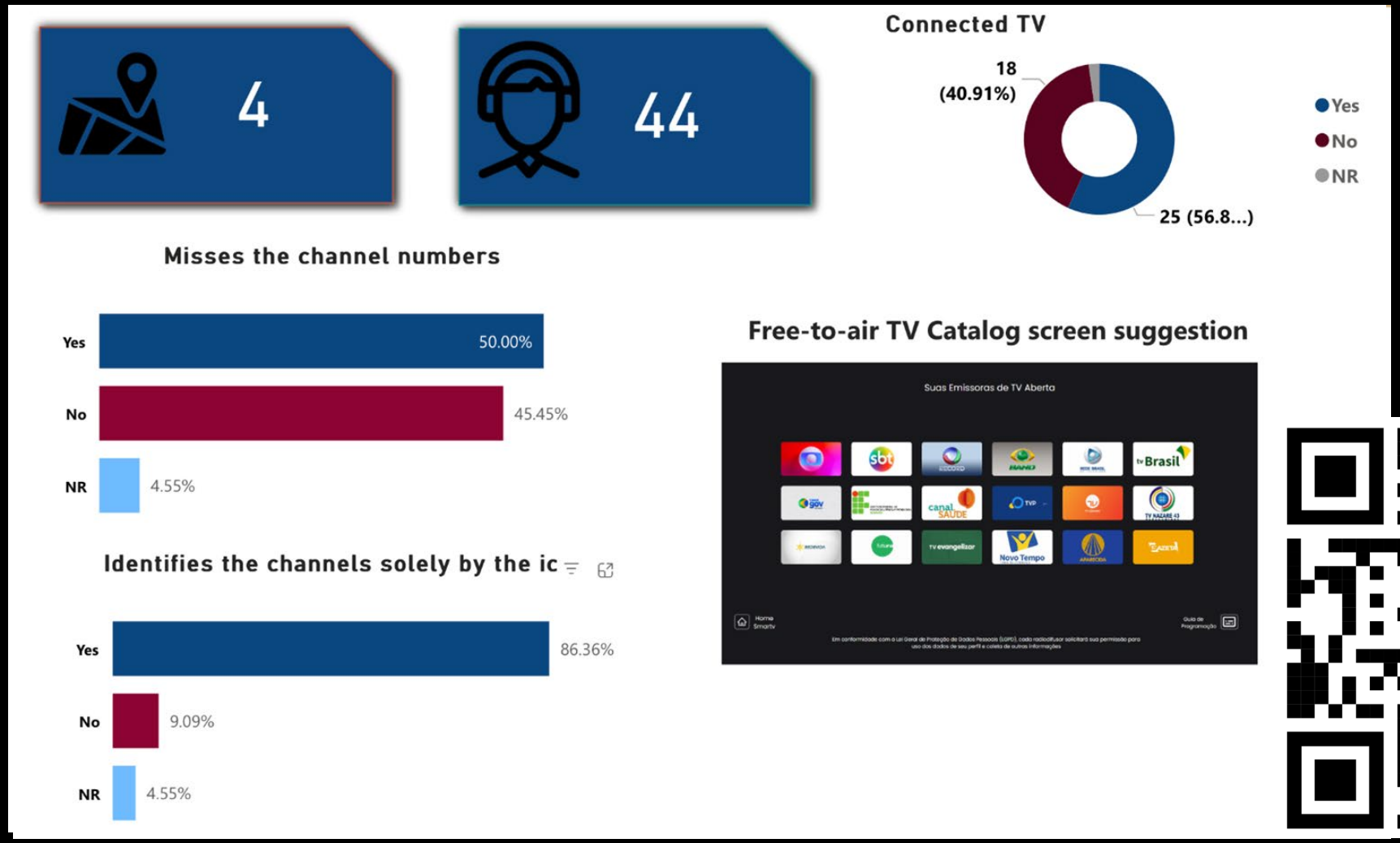
DTV+ Application-oriented Platform



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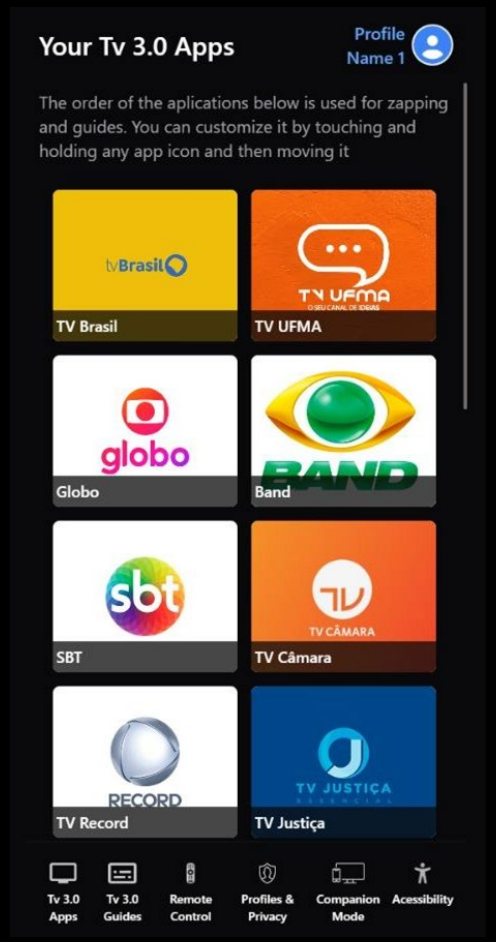
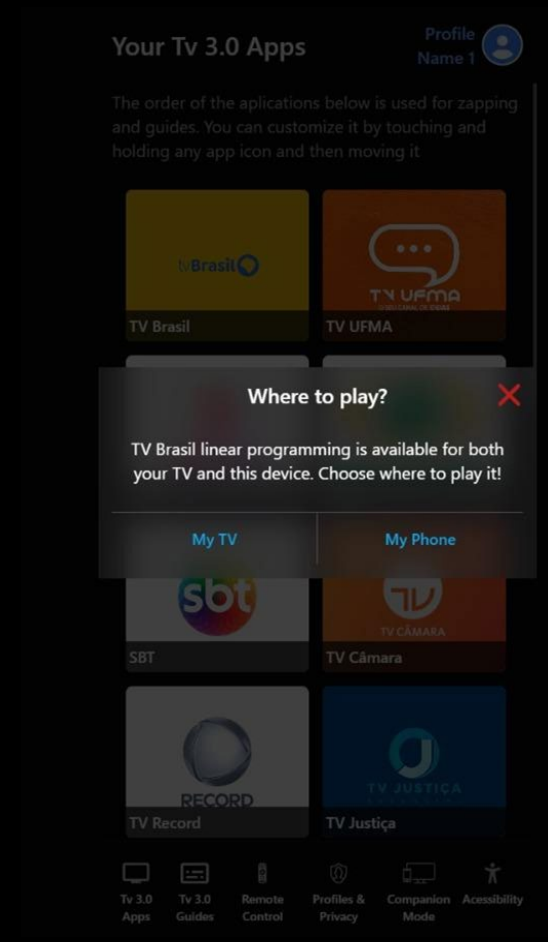
DTV+ Companion Devices





Thank you!

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