BROADCAST AS A SERVICE
a new business model for FM Radio & TV Signal Distribution
OLD BROADCAST BUSINESS MODEL

The FM and TV broadcast business until today

THE BROADCASTING COMPANY IS ALSO THE OWNER OF THE DISTRIBUTION NETWORK (sole owner and user)

NEEDED INFRASTRUCTURE (per TX station)

- High-power equipped TX tower
- High-power supply station
- Microwave links + frequency licences
- Highly-specialized technical personnel

High end-user demand, but new content-providers can't afford the CAPEX needed for this infrastructure

widely-used broadcast system, but also expensive and not flexible
The BaaS over IT network business model

**BaaS** (Broadcast as a Service):
- Cellular-like distribution network model
- Low infrastructure CAPEX and OPEX
- Modular and scalable design
- Easy to install
- Remote management and configuration
- Flexible re-routing of broadcast signals
- Shared infrastructure for multiple broadcast signals

This distribution model meets the demand of the content providers in a very cost-effective way.

**NEEDED INFRASTRUCTURE (per TX station) with TECNOROLL technology**

- Low-power all-in-one TX station
- High-power supply station
- Microwave links + frequency licences
- Highly-specialized technical personnel

**AUDIENCE**

- RADIO / TV content provider company 1
- RADIO / TV content provider company 2
- RADIO / TV content provider company n
OLD BROADCAST BUSINESS MODEL vs. BROADCAST AS A SERVICE

Field coverage: different approaches

AREA COVERAGE OPERATING WITH HIGH-POWER TX

Example estimated costs
Towers: 300K$ x 2
20KW Tx + cables, etc…: 80K$ x 2
Microwave links + licences: 20K$ x 2

CAPEX: 800K$
OPEX: high (power, maintenance, links...)

AREA COVERAGE OPERATING WITH LOW-POWER TX (SAME TERRITORY)

Example of estimated costs
Towers: 0
Tx + cables, etc…: 10K$ x 18
Microwave links + licences: 0

CAPEX: 180K$
OPEX: low
BROADCAST AS A SERVICE FOR RURAL AREAS

FM radio & TV broadcasting as a service

TELECOM CELLULAR NETWORK

Remote telemetry and management service

UPLINK

RADIO / TV content provider
BROADCAST AS A SERVICE FOR CITIES

FM radio & TV broadcasting as a service

TELECOM CELLULAR NETWORK

Remote telemetry and management service

RADIO / TV content provider
OLD BROADCAST BUSINESS MODEL vs. BROADCAST AS A SERVICE

Benefits comparison

Current high-power TX stations

- LARGE COVERAGE WITH A SINGLE TRANSMITTER
- CHANCE TO SELL THE SERVICES TO BROADCASTING COMPANIES
- PERFECT FIT WITH THE ALREADY INSTALLED TELECOM IP DISTRIBUTION NETWORK
- LOW ENVIRONMENTAL IMPACT AND MINIMUM ELECTROMAGNETIC POLLUTION
- NO NEED FOR MICROWAVE LINKS

Cellular low-power TX stations

- SCALABLE INVESTMENTS
- LOW PURCHASE AND OPERATING COSTS
- NETWORK WITH MODULAR AND SCALABLE DESIGN
- EXTREMELY LOW POWER CONSUMPTION
- SIMPLE INSTALLATION EVEN IN HARD-TO-ACCESS PLACES
- EASY AND FAST MAINTENANCE
- WIDESPREAD COVERAGE
### BROADCAST AS A SERVICE vs. OLD BROADCAST BUSINESS MODEL

#### CAPEX investments comparison

<table>
<thead>
<tr>
<th></th>
<th>NEW</th>
<th>OLD</th>
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<tbody>
<tr>
<td><strong>Cellular low-power TX</strong></td>
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<tr>
<td>Tower (basic infrastructure only)</td>
<td>Sharing the same cellular base-stations</td>
<td>Tower (basic infrastructure only)</td>
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<tr>
<td>10/20/50W transmitter (with cables &amp; accessories)</td>
<td>Around 10K $ each</td>
<td>20KW transmitter (with cables &amp; accessories)</td>
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<tr>
<td>Microwave links (with licences)</td>
<td>Sharing the same cellular base-stations links</td>
<td>Microwave links (with licences)</td>
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<td>Technical personnel</td>
<td>Same personnel used for the base-stations</td>
<td>Technical personnel</td>
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<tr>
<td>Management</td>
<td>Remote view and remote management</td>
<td>Management</td>
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<tr>
<td></td>
<td>Cellular low-power TX</td>
<td>Broadcast High-power TX</td>
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<td>--------------------------------</td>
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<tr>
<td>Maintenance costs</td>
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<td>$$$$</td>
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<tr>
<td>Microwave links licences</td>
<td>0</td>
<td>$$ per year</td>
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<td>Power consumption</td>
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<td>$$$$$$</td>
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<tr>
<td>(0 if solar-powered)</td>
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<tr>
<td>Technical personnel</td>
<td>$</td>
<td>$$$$</td>
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<tr>
<td></td>
<td>Basic technical knowledge required</td>
<td>Highly specialized for KW TX stations</td>
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