

# Radio Digitization in Switzerland



## AGENDA

- Introduction
- Digitalization Strategy of Swiss Private Radios
- Regulatory Framework for Digital FM
- Practical Implementation of HD Radio™ in Switzerland

**HD Radio™ Day, October 15<sup>th</sup> 2009**

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# Introduction

**We want a...**

- very cost-efficient
- individually definable and
- gradually (even slowly) expandable

**...solution for the future terrestrial transmission of our programs – combined with sufficient opportunities for content diversification**

**The solution is to bank on FM, and to digitalize stepwise (in the sense of a replacement technology with limited added value)**

**Consequences:**

- lowest possible additional operating costs and low investment costs
- slow development during a long period of time
- stepwise digitization (80-20 rule)

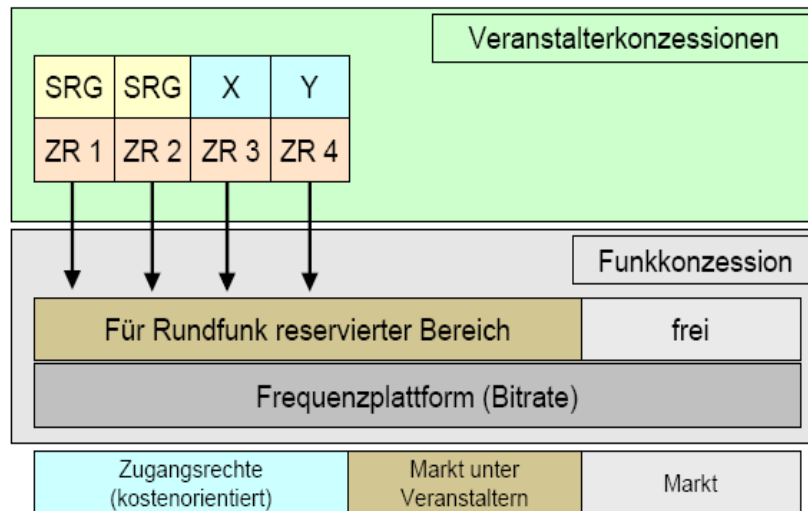
**Alternative:**

**2nd-row-funding, i.e. wait until public or strong national commercial broadcasters have built up a mass market (> 20% reach of devices)! Join the party then (and hope to still be able to play a relevant part).**

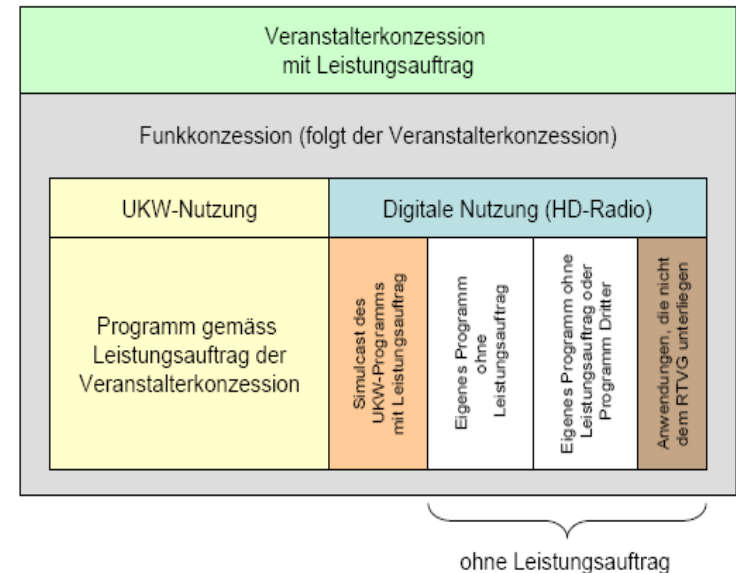
Quote from presentation of Dr. M. Dumermuth, OFCOM on Radioday 2009:



## Digitale Plattformen (DAB)



## Mögliche Digitalisierung von UKW



...this corresponds to VSP's strategy:

**DAB+ for new exclusive programs covering a complete linguistic region, and for added value-services**

**Digital FM for local and regional broadcasters, incl. opportunities for content diversification**

- **Swiss Broadcasting Corporation (SBC) Layer I** (exclusively SBC- programs on DAB) **in service since 1998**
- **DAB-Consortium founded in 2006; emerging to *swissmediacast* (SMC; founded in 2008) as operator of multiplex Layer II. Objective: mix of public/private commercial broadcasters, majority for private broadcasters**
- **In mean time: majority situation to disadvantage of private broadcasters (due to funding difficulties). Crucial co-founders have left the company.**

## **After call for tenders:**

- **8 licenses with compulsory slot (however, most of them will not participate in launch; loss of licence after 30 days)**
- **4 SBC programs (initial objective: only 2)**
- **6 programs without license, but subject to registration (partially not yet defined)**
- **Start Stage I, (Zurich/Bern/Basel) scheduled for 15th October, 2009**
- **Program occupancy at launch (11-14 programs): many open questions**

- ***swissmediacast* (SMC) is free to choose data services and programs subject to registration**
- **So far, SMC still intending to stick to its initial rules = exclusively transmit NEW programs targeting a complete linguistic region (no simulcast of existing programs – in particular local programs – with analogue terrestrial transmission)**
- **However, seen the looming under occupancy of the multiplex, SMC might accept to transmit existing local or regional FM programs (with accordingly negative consequences for the other local/regional FM broadcasters).**
- **Main motivation for DAB+ in Switzerland: medium wave-switch off; strong commitment by SBC; non-renewal of FM license for Energy Zurich (any other player will be forced to join in, as others are doing so; very limited enthusiasm!)**
- **Marketing campaign for layer II in preparation**

# Regulatory Framework for Digital FM

## Extract: **Program License** for Private Broadcasters

### Article 2 Distribution

- 1 The program is transmitted in analogue wireless terrestrial technology on the allocated FM frequencies, within the licensed area. **Furthermore, the license-holder is entitled to transmit his programs unalterably in digital technology on the allocated FM frequencies.**
- The transmission details, particularly those concerning the radio transmitter infrastructure to cover the licensed area (in accordance with fig. 3.3 of RTV Act, annex 1), comply with the terms of the radio license which is granted on the basis of the Frequency Management and Radio Licenses Act of 9th March, 2007.

## Extract: **Radio License** for Private Broadcasters I

### Use of FM frequencies in digital technology Article 2

**The license holder is further entitled to transmit the program mentioned in fig. 1.1 unalterably in digital technology on the allocated FM frequencies.**

## Extract: **Radio License** for Private Broadcasters II

- The digital transmission of the program on the allocated FM frequencies must not impair the reception quality of analogue program services in their respective licensed area.
- The OFCOM reserves the right to enact further requirements concerning the digital use of FM frequencies at any time, to account for incidents, technological findings and the international standardization process.
- The license holder is not entitled to be allocated certain or additional FM frequencies to improve the digital reception.

## Common rules for **FM** and digital transmission:

- New or altered transmission infrastructure may only be put into operation in accordance with the present radio license, and after the right of use has been granted.
- The OFCOM must be notified not later than three days after the start-up.

**These are the currently valid rules for HD I**

(digital simulcast of analogue program)

## Rules for Additional Programs and Data Services (HD2/HD3 etc.)

**Intended OFCOM regulation concerning the digital use of the FM band (88.0 MHz – 108.0 MHz):**

Holders of a radio license for the analogue transmission of their program on FM frequencies will moreover be entitled to **use these frequencies in digital technology, so as to:**

- simulcast their program unalterably
- transmit additional proper programs including the **respective program associated data services** (possibly subject to compulsory registration according to article 3, sub-paragraph a)

# Regulatory Framework for Digital FM



## Rules for Additional Programs and Data Services (HD2/HD3 etc.)

- **Transmission of no more than 1 third-party radio program (and its program-associated data services)**
- **Transmission of non-program-associated third-party data services up to a maximum of 10% of the overall digital transmission capacity**
- **Details for the digital use of FM frequencies to be specified in the radio license**

# Practical Implementation of HD Radio in Switzerland



- **The FM band is the most convenient and most important distribution vector at our disposal at low cost. This will still be the case in ten and more years (even the iPod nano now features an FM radio)**
- **Digitization is (as yet) optional for radio broadcasters and can take place stepwise**
- **FM HD Radio is the only low-cost system in the FM band that can be market-implemented in the short/medium term**
- **From the regulatory framework to the technological aspects: the system is practically ready to be launched**
- **However, the remaining window of opportunity for the launch of HD Radio has become short**

# Practical Implementation of HD Radio in Switzerland



- **A group of 4 to 7 private commercial radio broadcasters are associating in a task force to plan and to schedule the common launch of HD Radio on 1st September, 2010**
- **This organization will also include non-VSP-members and be independent from the Association of Swiss Private Radios (VSP)**

# Implementation Schedule Switzerland Stage I

DATE	TASK
Sept.-Oct. 2009	Information to all private radio broadcasters / Memoranda of understanding / Press release I
Nov. 2009	Pioneer stations associate in a task force (outside VSP)
Dec. 2009	Info 1 to device manufacturers, importers, retailers
Jan.-March 2010	Task force getting organized and planning start-up (Stage I) - Info 2 to device manufacturers, importers, retailers - Request for adapted technical annexes
April 2010	Solution for early stage finance (studio to transmitter) for start-up group <b>GO/NO decision! GO-date! Press release II</b>
May 2010	Start provision of devices / Marketing measures
Aug. 2010	Start-up of transmitters / Testing phase
1st Sept. 2010	Start-up of first digital programs and services
Sept.-Oct. 2010	Basic range of devices available retail
> 1st Nov. 2010	Launch of active marketing and promotional measures (audience)

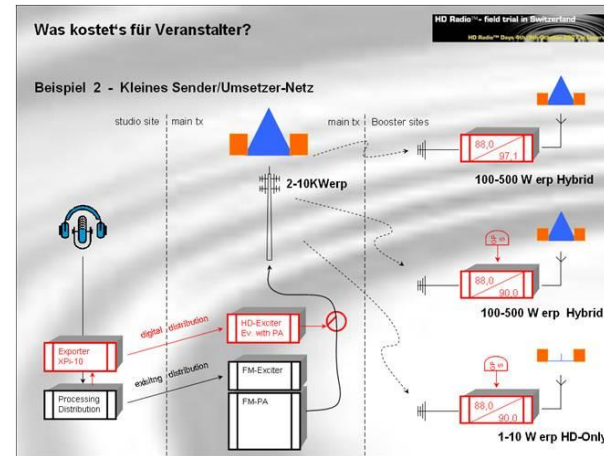
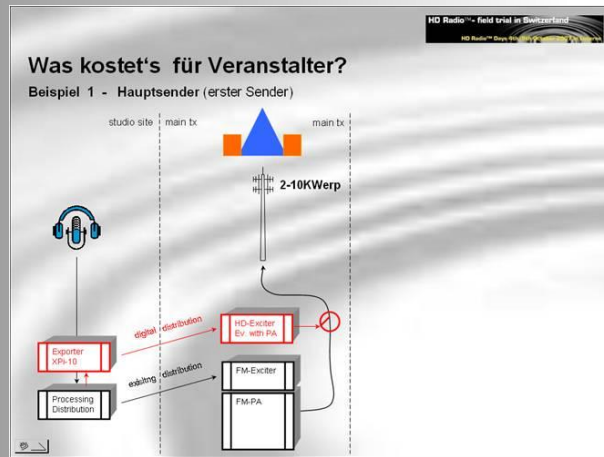
# Course of action for Launch of HD Radio



- A group of 4 to 7 private commercial radio broadcasters are associating in a task force to plan and to schedule the common launch of HD Radio on 1st September, 2010
- This organization will include non-VSP-members and be independent of the Association of Swiss Private Radios (VSP)
- **Loan for Project Planning / Sponsorship:**  
Part of the cost involved until the GO/NO GO decision to be covered by a singular contribution by pioneer stations interested in the start-up on 1st Sept., 2010
- **New funds to be raised by sponsorship (similar to field tests)**

# Start-up: What Costs Are Involved for a Radio Broadcaster?

(Individual specific planning / projecting indispensable!)



**Example 1:** CHF 20'000.-- - CHF 45'000.--/year

**Example 2:** CHF 50'000.-- - CHF 90'000.--/year

(corresponds to approx. 75-150 TCHF/200-300 TCHF hardware / software investments)

**This results in an audio capacity of 96-146kbs for the radio broadcaster  
(e.g. for 3 programs and some data)**

## Assumptions for estimate:

- Studio output to on-air, extra costs/year (in addition to FM, using existing mast locations)
- Expected purchase price Q4 2009, small to medium TX-performance
- Customary estimate of cost of capital, amortization, technical costs of operation
- >80% technical reach of current commercial user-reach
- excl. program production cost, audio processing

## Closing Remarks

- The preservation and the fostering of the broadcasting-privilege in the FM band must remain the prime concern of local / regional radio broadcasters – even in the case of digitization.
- Those who never start will never get there!
- Those who wait too long will be put out of business by third-parties' technology!  
(SBC/WLAN/DAB/LTE??)
- **Thank you!                      Questions?**



**SOON ON A  
RADIO STATION  
NEAR YOU!**

