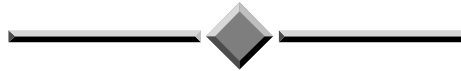




# **Analogue to Digital Television Broadcasting Switchover Strategy for the Republic of Croatia**



**Ministry of the Sea, Transport and Infrastructure**  
***Electronic Communications and Postal Service Directorate***

**Krešo Antonović**  
***Director***

**5<sup>th</sup> SEE Telecom Arena – Zagreb, 18 March 2009**



# National TV Broadcasting Switchover Strategy

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- ❖ National TV Broadcasting Switchover Strategy – adopted by the Government of the Republic of Croatia on **31 July 2008**
- ❖ This Strategy stipulates fundamental strategic guidelines for the introduction of digital television in the Republic of Croatia
- ❖ The main strategic goal of the Republic of Croatia – **full digital television switchover by 31 December 2010 at the latest**
- ❖ Another two documents were also adopted:
  - Decision on the start of digital TV broadcast and the end of analogue TV broadcast in the Republic of Croatia
  - Decision on manner of distribution of subsidies and criteria and conditions of granting the subsidies to the TV subscribers (natural persons), in order to purchase TV adapters for the reception of DVB programmes (Set Top Boxes)



# National TV Broadcasting Switchover Strategy

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- ❖ Ministry of the Sea, Transport and Infrastructure, in cooperation with the Croatian Post and Electronic Communications Agency (HAKOM), is responsible for the preparation and adoption of the secondary legislation relevant for the introduction of digital television
- ❖ **19 December 2008** – the *Ordinance on Analogue to Digital Radio and Television Broadcasting Switchover and Access to Multiplex Positions in Terrestrial Digital Broadcasting (OG 148/08)* was adopted by the Ministry of the Sea, Transport and Infrastructure, on the proposal by HAKOM
- ❖ This Ordinance (together with other secondary legislation related to the radio frequency spectrum management) provides legal basis for the introduction of digital television and digital terrestrial television switchover in Croatia



# National TV Broadcasting Switchover Strategy

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❖ The Strategy also includes two Action plans:

## 1. Action Plan for the Analogue to Digital Terrestrial Television Broadcasting Switchover in "digital regions"

- official commencing of "simulcast" – simultaneous broadcasting of nationwide television programmes in digital and analogue technology
- promotion campaign – informing consumers on details referring to analogue to digital television broadcasting switchover in relevant "digital region", and on possibilities of purchasing digital receivers
- delivery of subsidy vouchers and purchase of digital receivers enabling consumers – viewers to receive digital television contents
- analogue transmitter switch-off – upon the completion of the "simulcast" period, analogue terrestrial television network in a specific "digital region" shall be completely switched off, indicating a complete switchover to digital technology



# National TV Broadcasting Switchover Strategy

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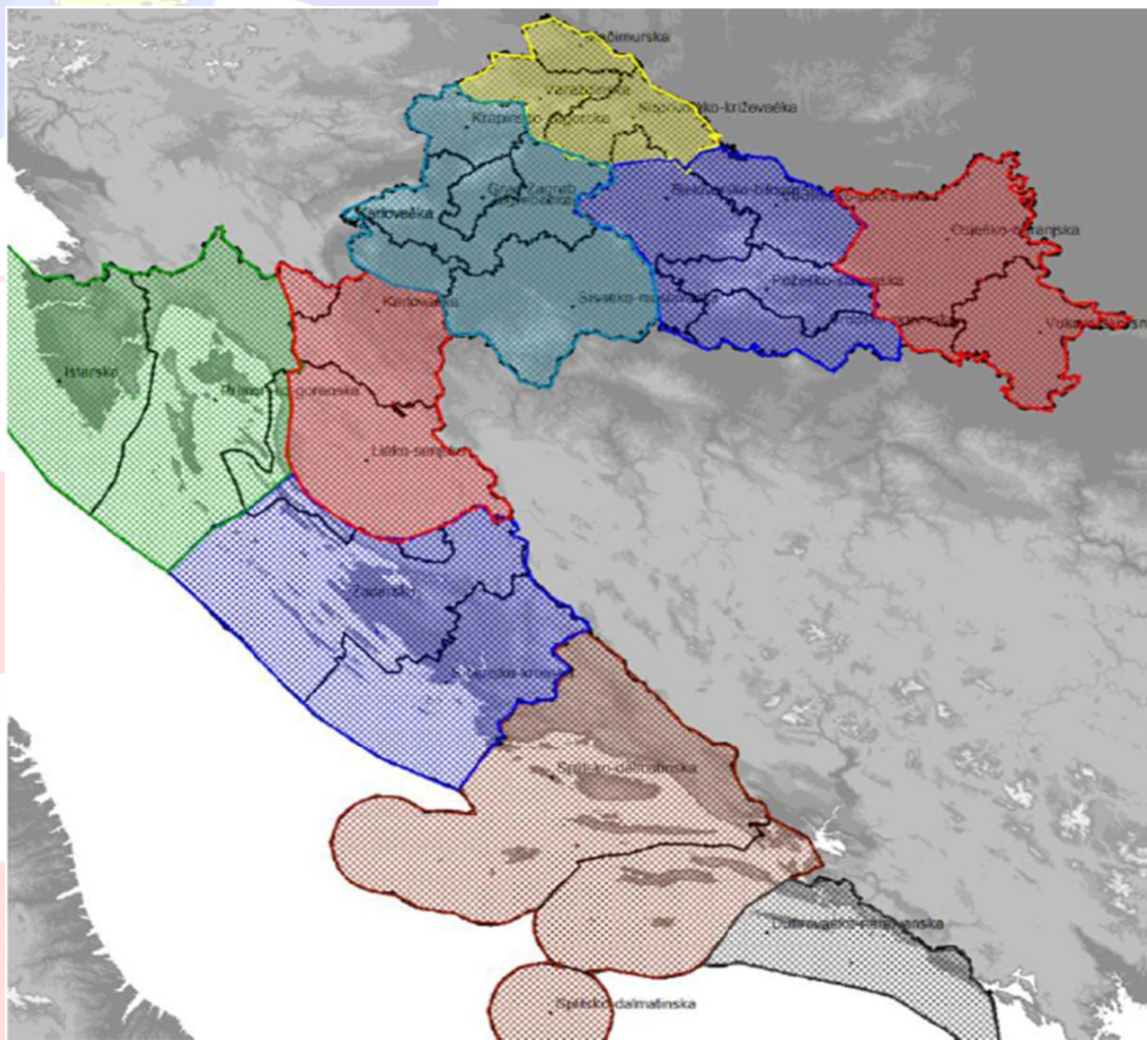
❖ The Strategy also includes two Action plans:

## 2. Action Plan for the Implementation of the Promotion Campaign

- **to inform the public on the reasons for analogue to digital terrestrial television broadcasting switchover:**  
informative TV commercials, designing the mascot and logo, an informative brochure, "My administration" web portal update, designing web site, etc.
- **to educate the public on digital television benefits:**  
indirect contacts with the public – TV shows, conferences, workshops and round tables, *on-line* quiz, banners, etc.  
direct communication with the public – *"Digital Switchover Road Show"* across Croatia's towns
- **to ensure the right to information and help in the process of the analogue to digital television broadcasting switchover for all the citizens of the Republic of Croatia:**  
DTV Call Centre (0800-1-1-2011), *"DTV for everybody"* event, etc.



# National TV Broadcasting Switchover Strategy



- ❖ 9 “digital regions” in the Republic of Croatia
- ❖ Pilot-project in the County of Istria – “Digital Istria” (100% DTV coverage)
- ❖ On 1 September 2008 the Government launched a two-year national DTV Educational Campaign



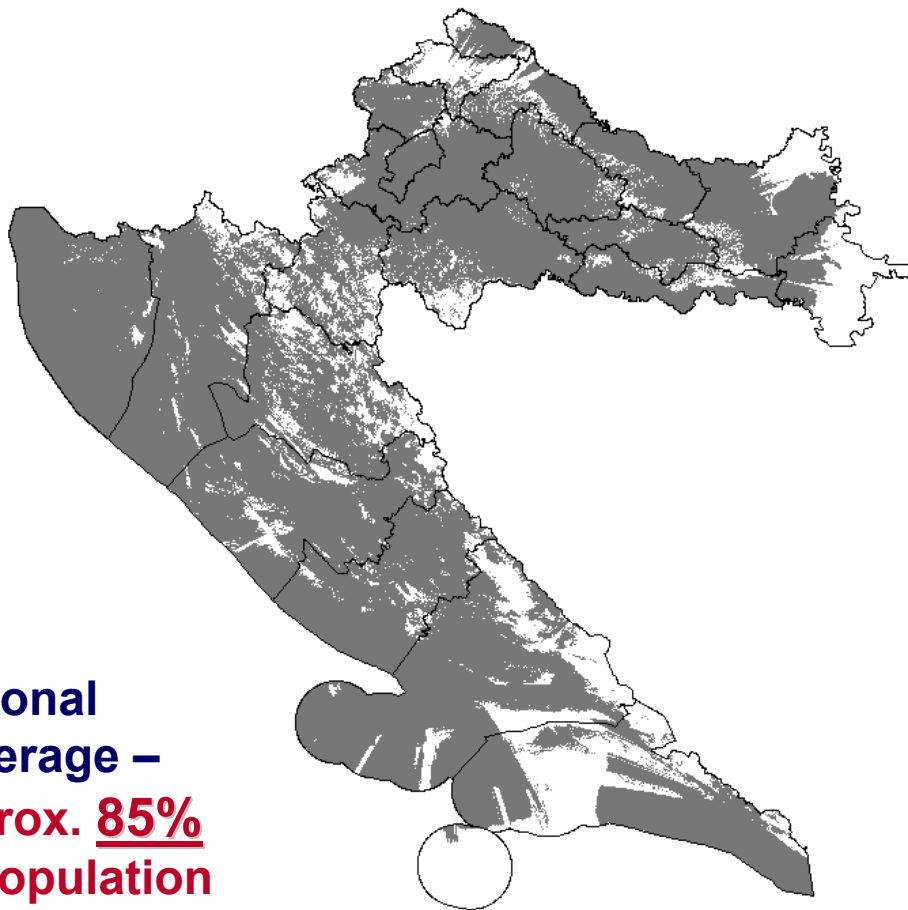
# National TV Broadcasting Switchover Strategy

## MUX A Coverage

### Most important DVB-T transmitters:

HRT dom  
Sljeme  
Učka  
Stipanov Grič  
Čelevac  
Ugljan  
Promina  
Labinštica  
Vidova Gora (Brač)  
Srđ  
Psunj  
Papuk  
Josipovac  
.....

National coverage –  
**approx. 85%**  
of population



# National TV Broadcasting Switchover Strategy

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- ❖ Before 31 December 2010, Croatia will have filled 2 multiplexes:

**MUX A** – 4 existing national TV broadcasters in Croatia



**HRT1**

**HRT2**

**RTL**  
TELEVIZIJA

**nova**

**MUX B** – will be operational in the course of 2009





# National TV Broadcasting Switchover Strategy

year	2008				2009								2010															
month	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
D1																												
D2																												
D3																												
D4																												
D5																												
D6																												
D7																												
D8																												
D9																												

**Time schedule for digital television switchover across 9 “digital regions” in Croatia**



# National TV Broadcasting Switchover Strategy

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❖ The Strategy also enables the introduction and provision of new services or business models, due to the releasing of the radio frequency spectrum for new allocations and applications upon digital switchover – **DIGITAL DIVIDEND:**

- additional nationwide digital terrestrial television programmes in either standard definition (SDTV) or high definition (HDTV)
- digital terrestrial television programmes at regional and local level
- television services for mobile phones (DVB-H) and other types of mobile video and multimedia
- mobile communications, such as voice calls or information data
- wireless broadband communications services
- wireless microphones for theatres, television and radio production and live music events
- short range wireless applications, such as fixed wireless access at home
- public safety services, such as wireless communications for the emergency services



# National TV Broadcasting Switchover Strategy

**Digital dividend** – UHF frequency bands IV and V – allocated to multiplexes at national and regional level and associated broadcasting services and other electronic communications services

channel	21	55	56	60	61	69	70
frequency	470MHz		750MHz		790MHz		860MHz
service	DVB-T/H		DVB-T		IMT		
<b>MUX A - national</b>	4xSD: HRT1, HRT2, NOVA, RTL + 1xSD: additionally available						
<b>MUX B - national</b>	5xSD: additionally available						
<b>MUX C - national</b>	5xSD: additionally available						
<b>MUX D - regional /national</b>	1-3xSD: existing regional programs + 2-4 SD: additionally available (regional/national)						
<b>MUX E - national</b>	DVB-H: additionally available ~30 TV programs or ~ 60 radio programs						
<b>MUX F - national /regional</b>	additionally available: DVB-T iii DVB-H						
<b>MUX G - regional /national</b>	additionally available: DVB-T iii DVB-H						
<b>MUX H - regional</b>	additionally available: DVB-T iii DVB-H						



# National TV Broadcasting Switchover Strategy

**Digital dividend** – VHF frequency band III – allocated to multiplex at national/regional level and associated broadcasting services and other electronic communications services

channel	5	12	13
frequency	174MHz		230MHz
service	DVB-T/DVB-H/T-DAB/DMB		
<b>MUX VHF - national /regional</b>	additionally available: DVB-T, DVB-H, T-DAB, DMB		



# National TV Broadcasting Switchover Strategy

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- ❖ **28 January 2009** – HAKOM launched public tender procedure for granting the individual rights for the use of radio frequencies relating to digital television in MUX A and MUX B
- ❖ Applications deadline shall be 30 March 2009
- ❖ HAKOM's decision shall be adopted by **28 April 2009** at the latest



# National TV Broadcasting Switchover Strategy

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- ❖ **12 February 2009** – a new Decision on manner of distribution of subsidies and criteria and conditions of granting the subsidies to the TV subscribers (natural persons), in order to purchase TV adapters for the reception of DVB programmes (Set Top Boxes), adopted by the Government:
  - each TV subscriber (natural person) is entitled to the subsidy in amount of **75,00 kn**, in the form of voucher, to purchase one digital receiver (Set Top Box)
  - vouchers shall be distributed to all TV subscribers by OIv company in cooperation with the Croatian Radiotelevision
  - vouchers shall be used before 31 December 2010 at the latest
- ❖ this Decision ensures the digital receivers subsidising in a **technologically neutral form**
- ❖ **the Central State Administrative Office for e-Croatia** – responsible for the daily management tasks related to the Strategy implementation



# National TV Broadcasting Switchover Strategy

Finally, we are determined to implement the Strategy before 2012 (EC Recommendation) ..... definitely to avoid following scenario:





Thank you for your attention

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Ministarstvo mora, prometa i infrastrukture

Ministry of the Sea, Transport and Infrastructure