



**HAKOM**

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**Digital Dividend  
The Croatian Experience**

**- Ivančica Sakal -**

**CROATIAN POST AND  
ELECTRONIC COMMUNICATIONS AGENCY**

**- HAKOM -**

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- ❖ Digital to analog transition finalised in **October 2010** – 790-862 MHz clear in Croatia
- ❖ **Different neighbours** – different transition possibilities and strategies
- ❖ D.D. not available for use on the whole country
- ❖ Analysis of possible interferences – frequency blocks of different qualities



- ❖ Valuable spectrum – decision not only on technical basis – **economical and political**
- ❖ Possible mechanisms of assignment – **public call** (supply exceeds demand), **beauty contest, auction**
- ❖ Regulator – auction the cleanest way, each bidder responsible for its own actions
- ❖ Exhaustive **preparations** necessary – analysis and software

- ❖ Croatia – market conditions and economical crisis influenced the choice
- ❖ From consultations only 2 operators interested
- ❖ State budget needs money ASAP
- ❖ **Public call** chosen – quickest transparent way of assignment
- ❖ Fees defined by the Ministry



- ❖ 3 blocks 2x10 MHz – operators define priorities on frequency blocks, first-come-first-served (first application, defined in the Law)
- ❖ In case of 2 operators – middle block empty (possibility for the 3rd or new operator or divide between 2 existing)
- ❖ Disadvantage – same price – different blocks – 1 dissatisfied operator
- ❖ All international conditions described in public call (transmitters in neighbouring countries)
- ❖ Documentation: <http://www.hakom.hr/default.aspx?id=1122>



- ❖ 2 operators won blocks 2x10 MHz in October 2012 until 2024 – one operator already started implementation in rural areas – public call justified (free spectrum remained)
- ❖ Situation with neighbouring countries improving
- ❖ Procedure of solving interference to DVB-T receivers in progress
- ❖ Possible assignment of free block (either 2x2x5 MHz or 1x2x10 MHz)



- ❖ Auction the best way for the regulator – preparations necessary, takes time
- ❖ Solving interference to DVB-T receivers – define responsibilities before assignments



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**Thank You for Your Attention!**

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