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TECHNOLOGY MADE SIMPLE

Next-Generation Digital Broadcasting

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Next-Generation Digital Broadcasting

What really matters?

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Next-Generation Digital Broadcasting

What really matters?

Two paths to innovation

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Next-Generation Digital Broadcasting
What really matters?

Two paths to innovation

Evaluation at the system level; ex. first ATSC

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Next-Generation Digital Broadcasting
What really matters?

Two paths to innovation

Evaluation at the system level; ex. first ATSC

Evaluation at the component level; ex. MPEG process

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Next-Generation Digital Broadcasting
What really matters?

Two paths to innovation

Evaluation at the system level; ex. first ATSC

Evaluation at the component level; ex. MPEG process

For success transparency is a necessity

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Next-Generation Digital Broadcasting
What really matters?

Two fundamental components

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Next-Generation Digital Broadcasting
What really matters?

Two fundamental components

Services

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What really matters?

Two fundamental components

Services

Payload

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What really matters?

Services

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What really matters?

Services

Transition Plan

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Next-Generation Digital Broadcasting
What really matters?

Services

Transition Plan (one example)

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Next-Generation Digital Broadcasting
What really matters?

Services

Transition Plan (one example)

A/53 Backwards compatible

MPEG-2 high quality “main” channel

in addition to

new services **inaccessible** to legacy receivers

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Next-Generation Digital Broadcasting
What really matters?

Services

Transition Plan ✔

Beyond HD

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Next-Generation Digital Broadcasting
What really matters?

Services

Transition Plan ✔

Beyond HD

HEVC? or AVC?

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Next-Generation Digital Broadcasting
What really matters?

Services

Transition Plan ✔

Beyond HD ✔

Portable

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Next-Generation Digital Broadcasting
What really matters?

Services

Transition Plan ✔

Beyond HD ✔

Portable

Radios in appliances

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Next-Generation Digital Broadcasting
What really matters?

Services

Transition Plan ✔

Beyond HD ✔

Portable

Radios in appliances(M-EAS)

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Next-Generation Digital Broadcasting
What really matters?

Services

Transition Plan ✔

Beyond HD ✔

Portable ✔

Interactive "Second Screen"

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Next-Generation Digital Broadcasting
What really matters?

Services

Transition Plan ✔

Beyond HD ✔

Portable ✔

Interactive "Second Screen" ✔

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Next-Generation Digital Broadcasting
What really matters?

Payload

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Next-Generation Digital Broadcasting
What really matters?

Payload

Link budget, aka Planning Factors

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Next-Generation Digital Broadcasting
What really matters?

Payload

Link budget, aka Planning Factors

Tower density

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What really matters?

Payload

Link budget, aka Planning Factors

Tower density (flux density)

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Next-Generation Digital Broadcasting
What really matters?

Payload

Link budget, aka Planning Factors

Tower density (flux density)

Modulation Method

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Next-Generation Digital Broadcasting
What really matters?

Payload

Link budget, aka Planning Factors

Tower density (flux density)

Modulation Method (Shannon Limit)

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Next-Generation Digital Broadcasting
What really matters?

Payload

Link budget, aka Planning Factors

Tower density (flux density)

Modulation Method (Shannon Limit)

Error Correction Scheme

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Next-Generation Digital Broadcasting
What really matters?

Payload

Link budget, aka Planning Factors

Tower density (flux density)

Modulation Method (Shannon Limit)

Error Correction Scheme (LDPC)

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Next-Generation Digital Broadcasting
What really matters?

Payload

Link budget, aka Planning Factors

Tower density (flux density)

Modulation Method (Shannon Limit)

Error Correction Scheme (LDPC)

Today:~3bit/Hz fixed, ~1bit/Hz portable

Tomorrow: ?

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What really matters?

conclusion

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Next-Generation Digital Broadcasting
What really matters?

conclusion

Transparency

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Next-Generation Digital Broadcasting
What really matters?

conclusion

Transparency

Transition Plan

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What really matters?

conclusion

Transparency

Transition Plan

Portable

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What really matters?

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