



Digital Television

William T. Hayes
Director of Engineering & Technology
Iowa Public Television



DTV Overview

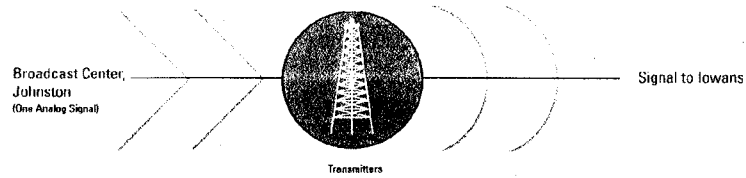
- Ω What is digital television?**
- Ω What is required of the broadcasters?**
- Ω IPTV plans**
- Ω Questions**

What is digital television?

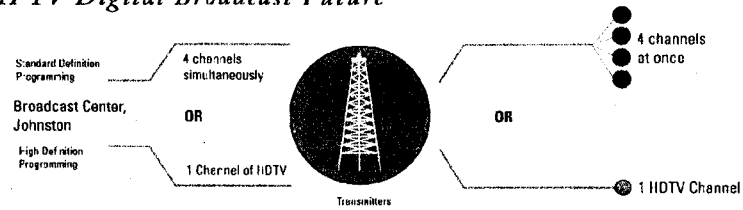
- ∞ **Mandated by the FCC**
- ∞ **High Definition Television**
- ∞ **Standard Definition Television**
- ∞ **Multicasting and datacasting**

DIGITAL BROADCASTING: *How will we get there?*

IPTV Broadcast at Present



IPTV Digital Broadcast Future





What is required of the broadcasters?

- ∩ **Commercial on-air 5/1/02**
- ∩ **Non-commercial on-air 5/1/03**
- ∩ **Simulcast period 5/1/06...**
- ∩ **or until 85% of the homes in the broadcast area have the ability to receive DTV signals.**
- ∩ **Turn in one of the channels for redistribution.**



Transmitting the digital signal

- ∩ **Each full power analog station has a corresponding digital channel assignment**
- ∩ **The majority are in the UHF band**
- ∩ **Completely separate operations requiring a different transmitter and in most cases a different antenna.**

Transmitting the digital signal

- Ω **The UHF transmission systems have efficiencies in the 22% to 35% range.**
- Ω **With ancillary equipment each station can expect to add 800 kVA to their demand.**
- Ω **Power costs are estimated to be an additional \$350,000.00 per year.**

YOUR STATEWIDE NETWORK

Ch 25
Rock Rapids

Ch 33
Sibley

Ch 24
Mason City

Ch 14
Decorah

Ch 41
Lansing

Ch 27
Sioux City

Ch 21
Fort Dodge

Ch 32
Waterloo

Ch 11
Des Moines

Ch 12
Iowa City

Ch 32
Council Bluffs

Ch 36
Red Oak

Ch 33
Ottumwa
Ch 54
Keosauqua

Ch 38
Ft. Madison

Iowa Public Television 

Ch 44
Keokuk



Cost Breakout

- Ω **Transmission Infrastructure**
- Ω **The State funds the cost of building the infrastructure to replicate the existing analog operation**
- Ω **Content Creation**
- Ω **IPTV solicits private sector funds to build the digital content creation facilities**



Cost Breakout

- Ω **Transmission Infrastructure**
- Ω **\$32,000,000.00**

- Ω **Content Creation Infrastructure**
- Ω **\$10,000,000.00**



Cost Breakout

- ∩ **We have applied for a 25% matching grant from PTFP.**
- ∩ **Match amount is approximately \$5.5M.**
- ∩ **We have begun work on a DDF with a 50% match for transmitters in Fort Dodge, Mason City and Iowa City.**
- ∩ **Match amount is approximately \$1.0M**



Where We Are So Far

- ∩ **Des Moines Transmitter Complete**
- ∩ **Sioux City Transmitter to be completed by September, 2002**
- ∩ **Cedar Rapids/Waterloo Transmitter completed by July, 2002**
- ∩ **Remaining facilities to be determined.**

Questions