

Fiber-to-the-Home Council

North America

TAP INTO THE MOST VALUABLE BROADBAND RESOURCE AVAILABLE



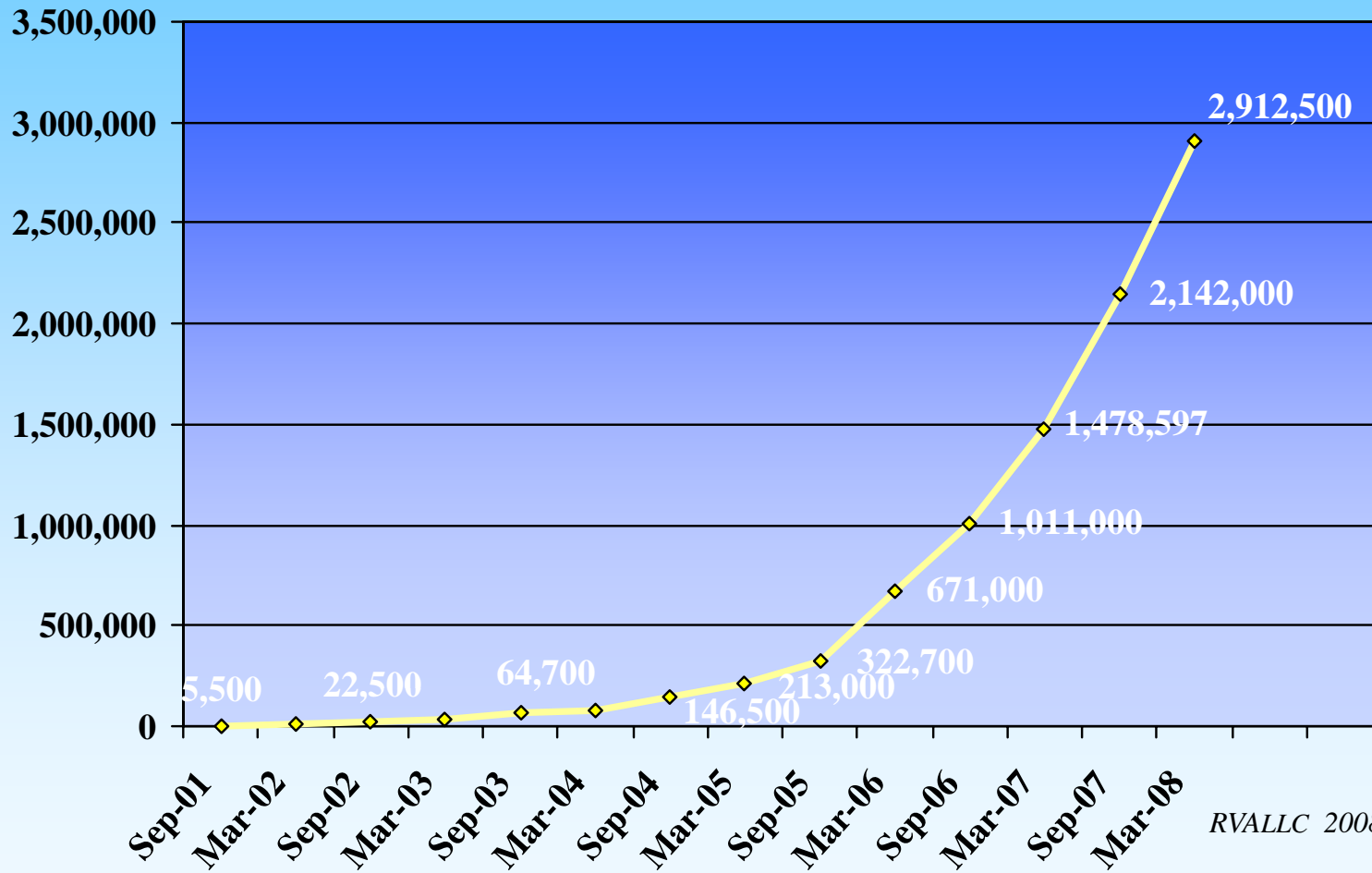
North American FTTH/FTTP Deployment Status

Presented by:
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Market Research & Consulting



FTTH Homes Connected (Cumulative – North America)



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Note: Over 98% in US



In U.S. areas covered by Verizon or Tier 3 ILECs (About 1/3 of households), **5.8%** of homes are already directly connected with fiber. (Most by telcos, but some MSO and other competition has begun.)



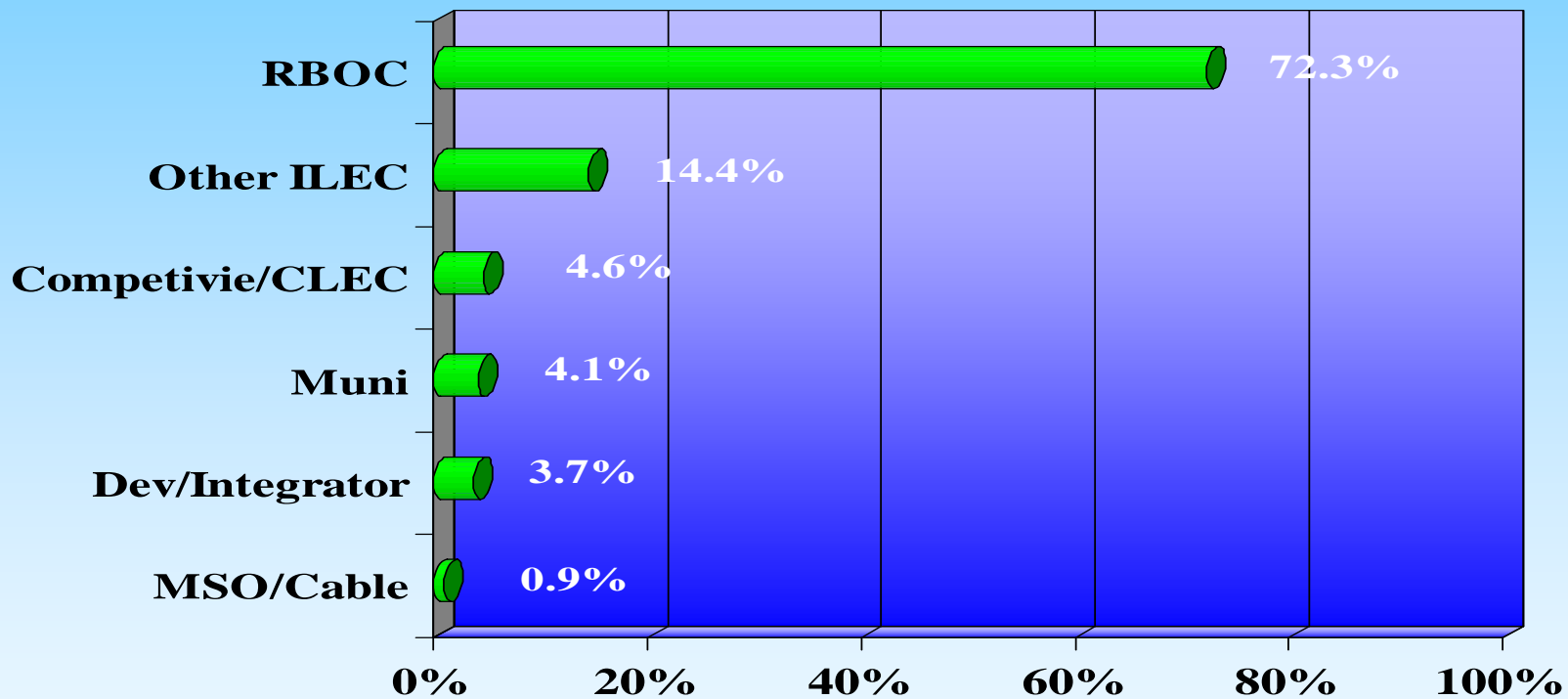
In U.S. areas covered by AT&T, Qwest, or Tier 2 ILECs (About 2/3 of households), only **0.6%** of homes are directly connected with fiber. (Most from competitive providers, such as facilities-based CLECs and Munis, though telcos are connecting some new homes.)



In North America outside of the U.S., only **0.1%** of homes are connected with fiber.

US FTTH Subscribers

By Type Of Provider



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FTTH/FTTP Consumer Study

May 2008

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Awareness of Relevant Names

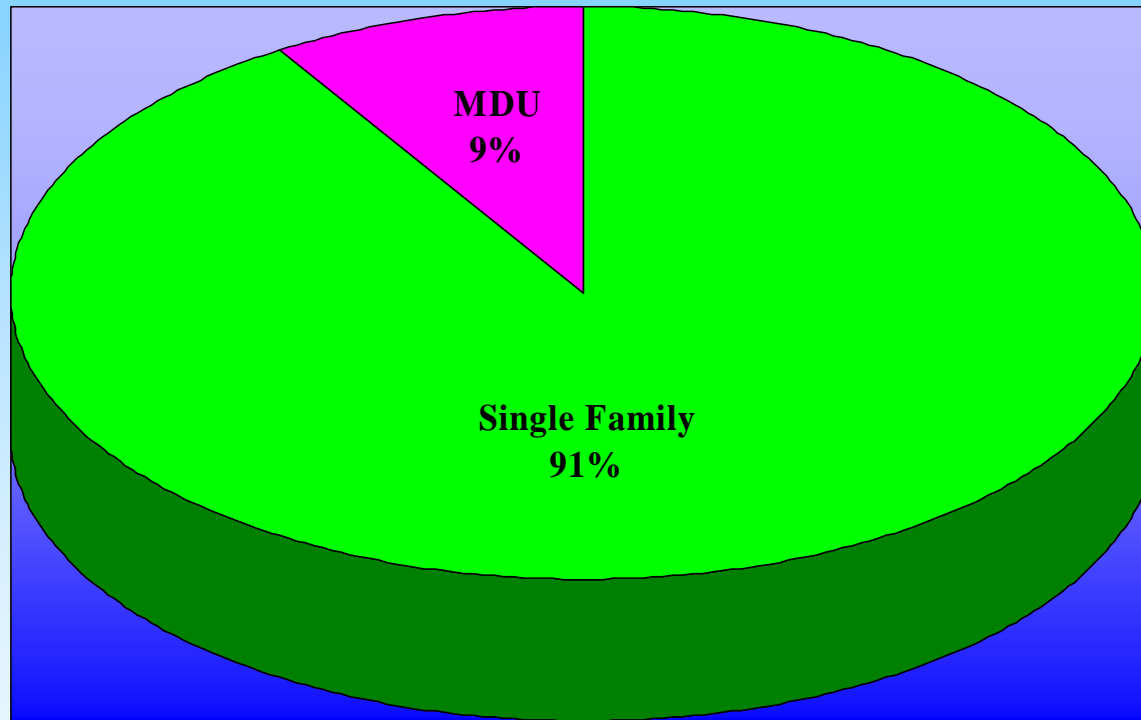
- Some confusion with “direct fiber connection” - especially from customers from some cable TV companies
- Only 1% knew they had “IPTV” (Actual percent is considerably higher)

FTTH Vs. Other Broadband Consumer Demographics

Median Income (000s)		Median Age	
FTTH	58.5	No Internet	52.2
Wireless	58.1	FTTH	49.2
DSL	50.4	Dial-up	48.0
Cable	49.7	Cable	47.5
Dial-up	41.6	DSL	46.4
No Internet	21.9	Wireless	42.8

% Married		% Single Family Housing	
FTTH	66.8%	FTTH	89.8%
Wireless	66.5%	Wireless	86.7%
DSL	65.0%	DSL	85.4%
Cable	61.3%	Cable	83.1%
Dial-up	60.5%	Dial-up	80.7%
No Internet	37.4%	No Internet	71.0%

Type Of Residence (FTTH Service)



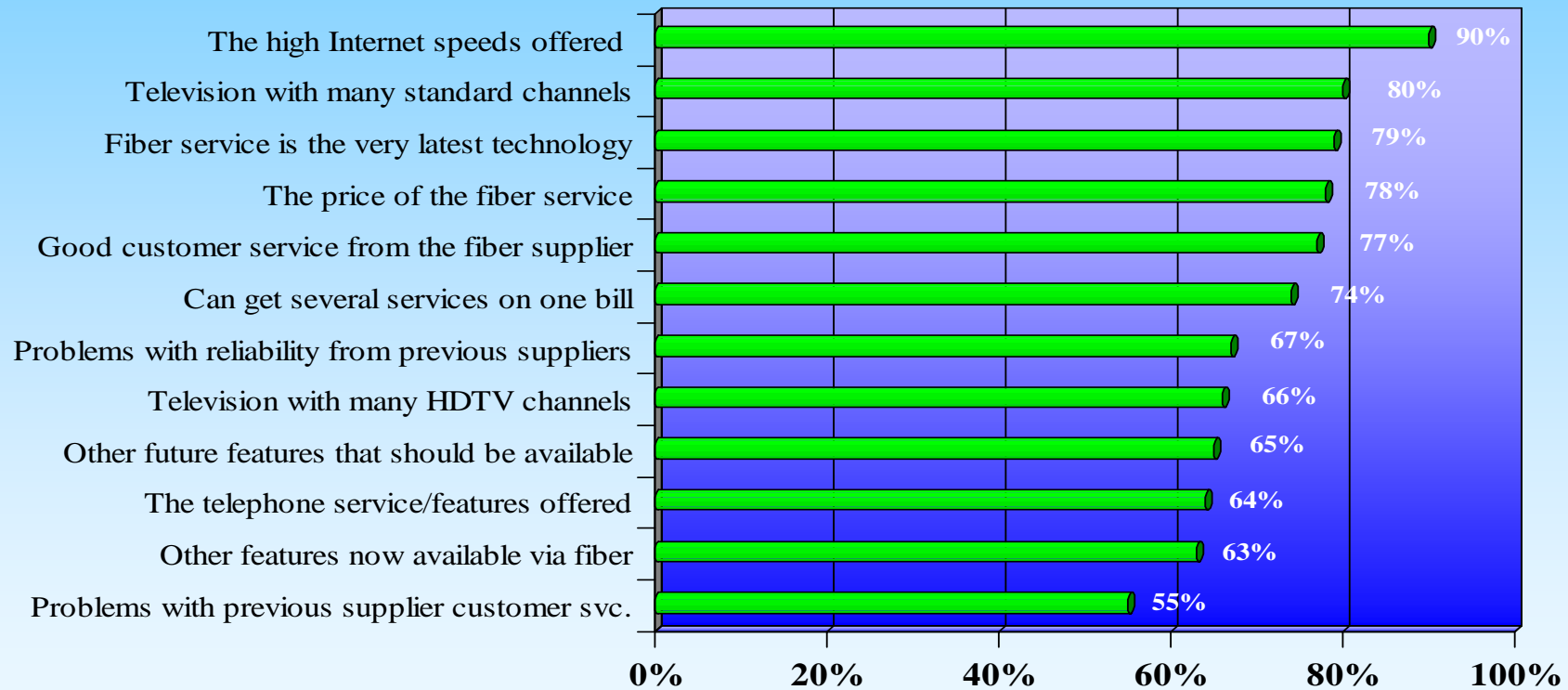
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MDU Demographics

- Slightly younger – Median age 44
- Slightly less affluent – Median income \$44,000

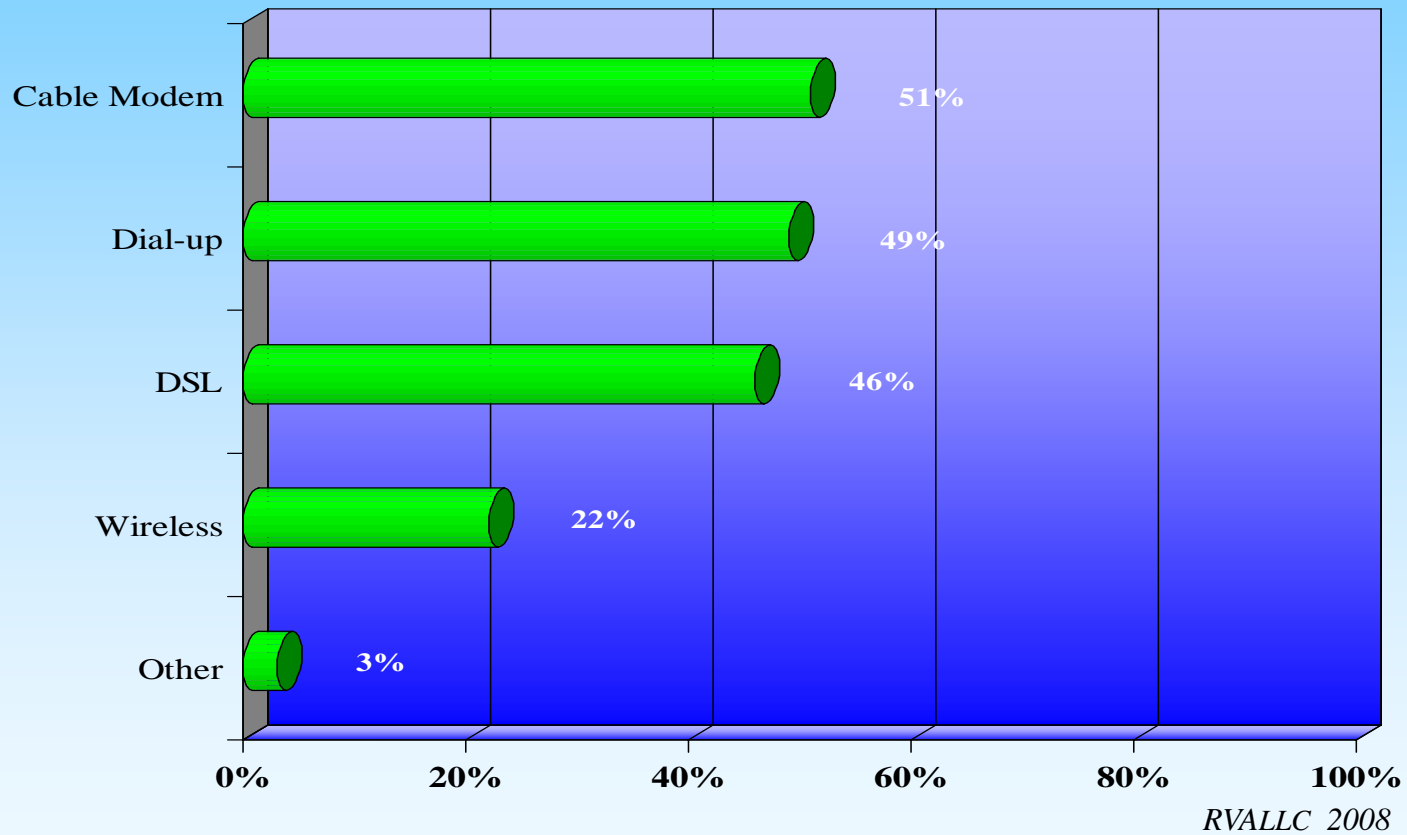
Reasons For Subscribing To Fiber Optic Service

(Percent rating somewhat or very important)

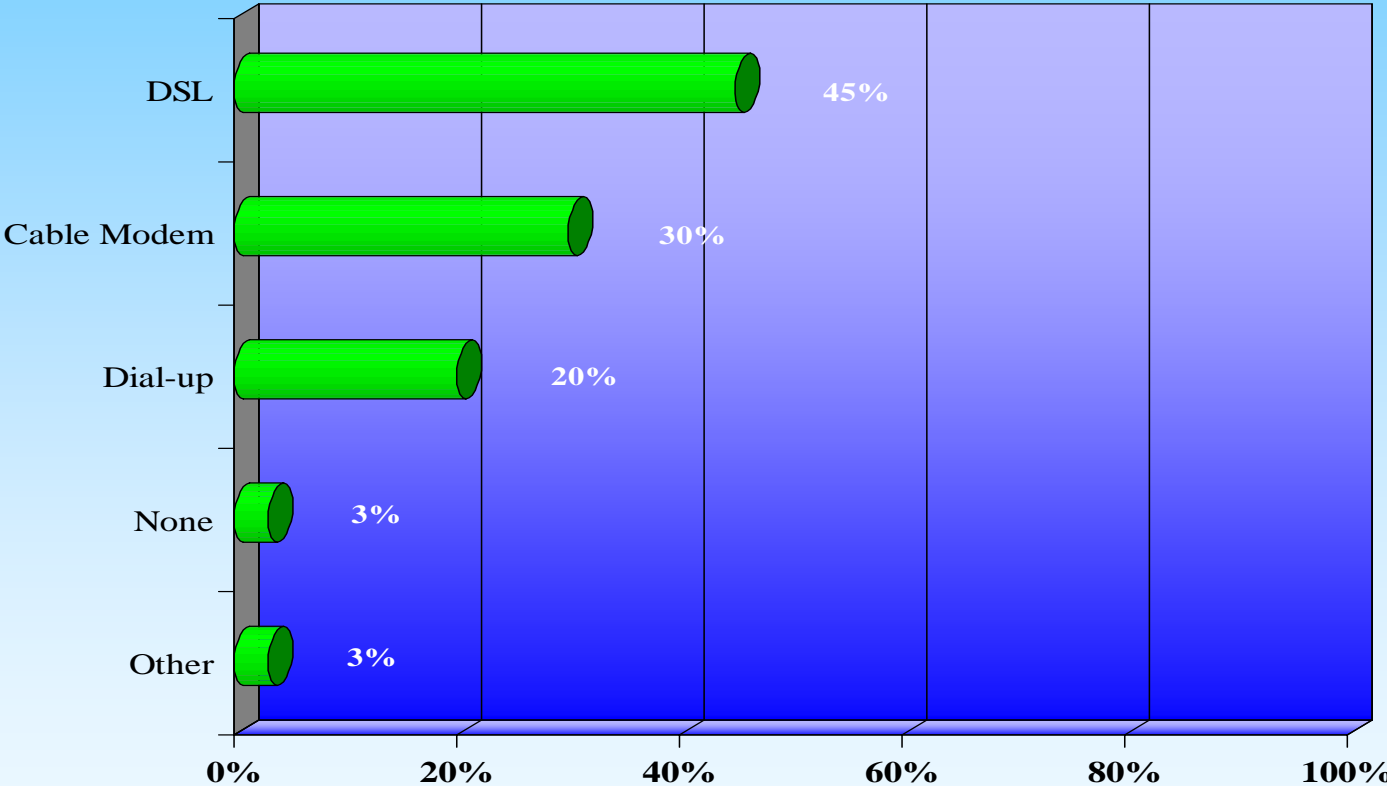


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Awareness Of Internet Alternatives To FTTH At Home

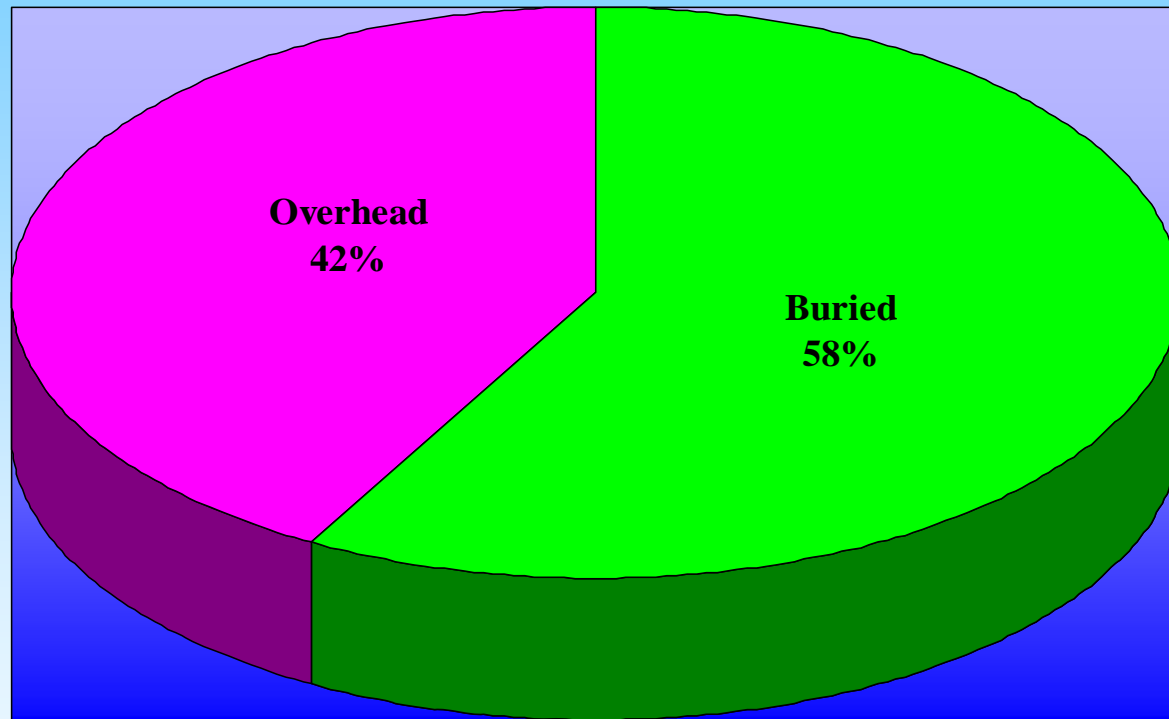


Internet Service Previous To FTTH



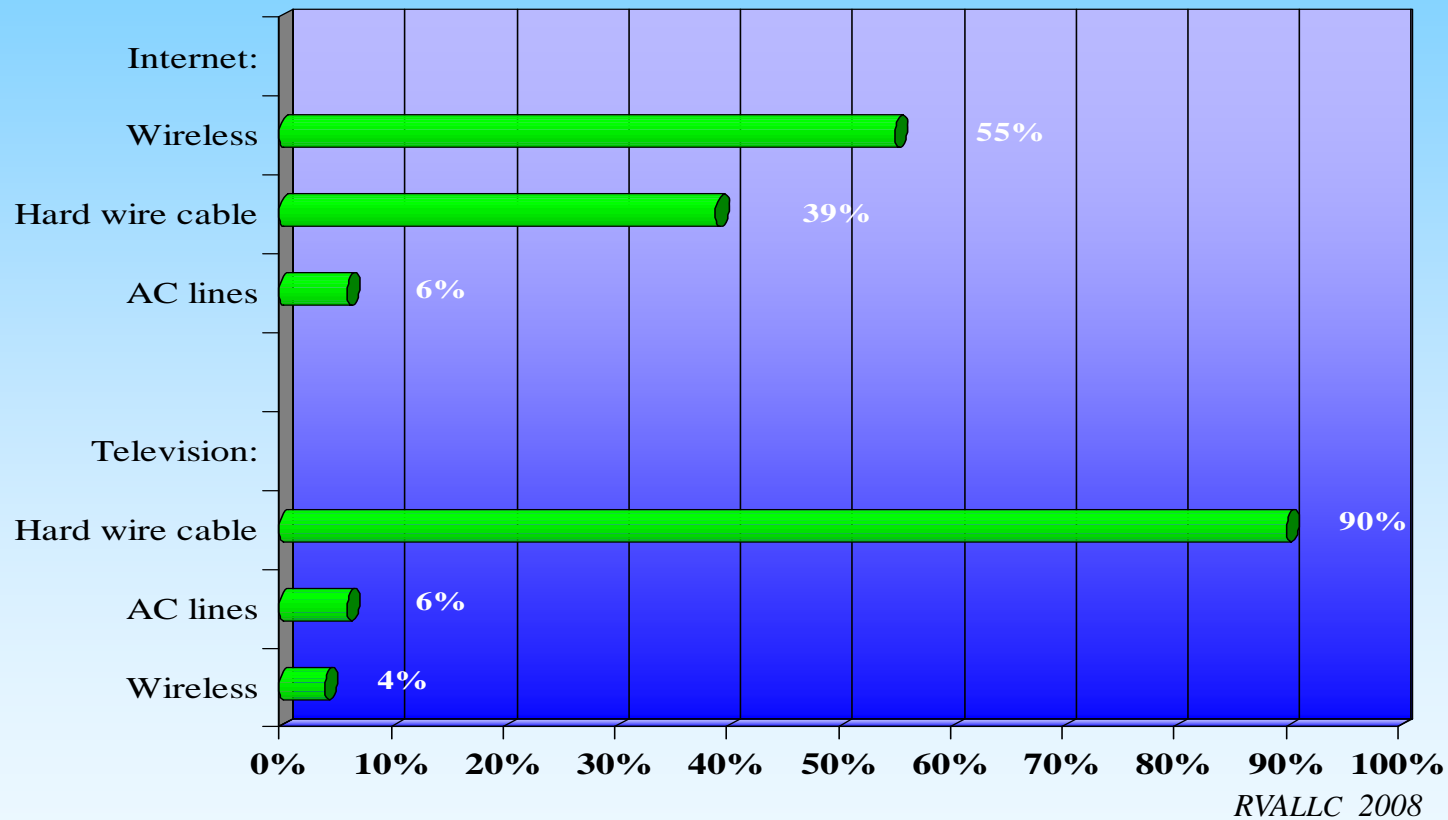
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Type Of FTTH Service To House



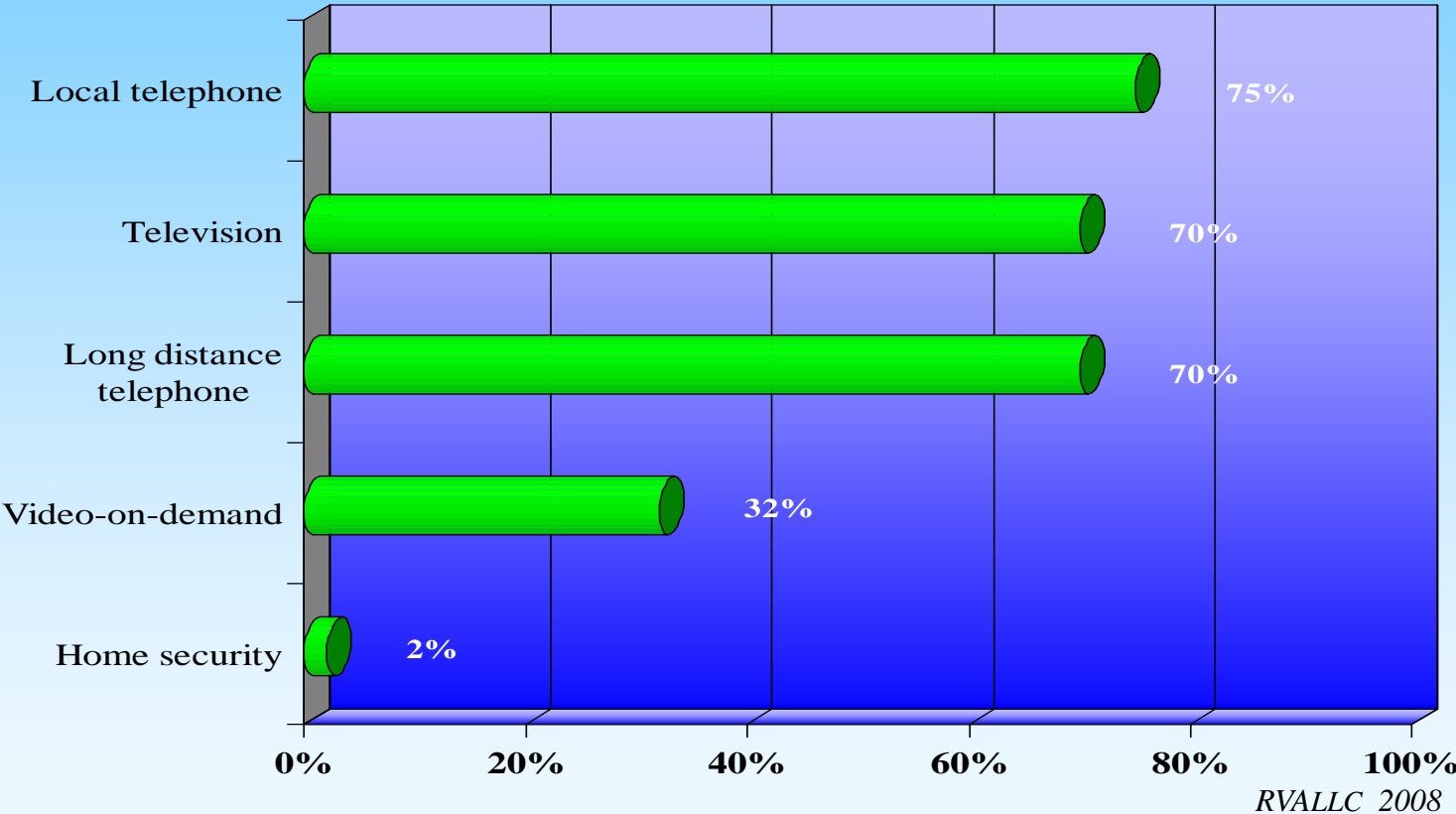
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How Services Distributed Within Home

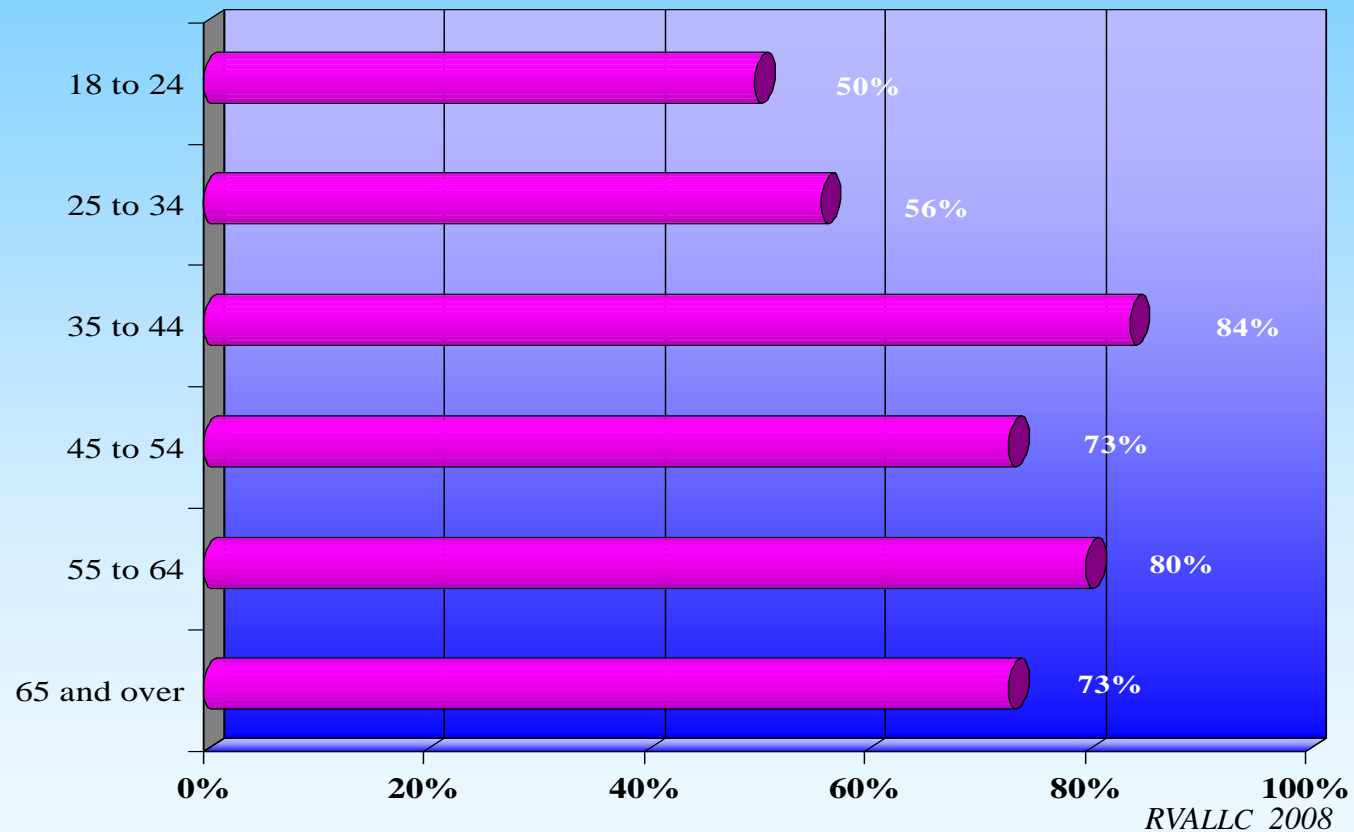


*21% of Television hard line said to be Cat 5. (Most don't know)

Services Subscribed To Over FTTH (Besides Internet)

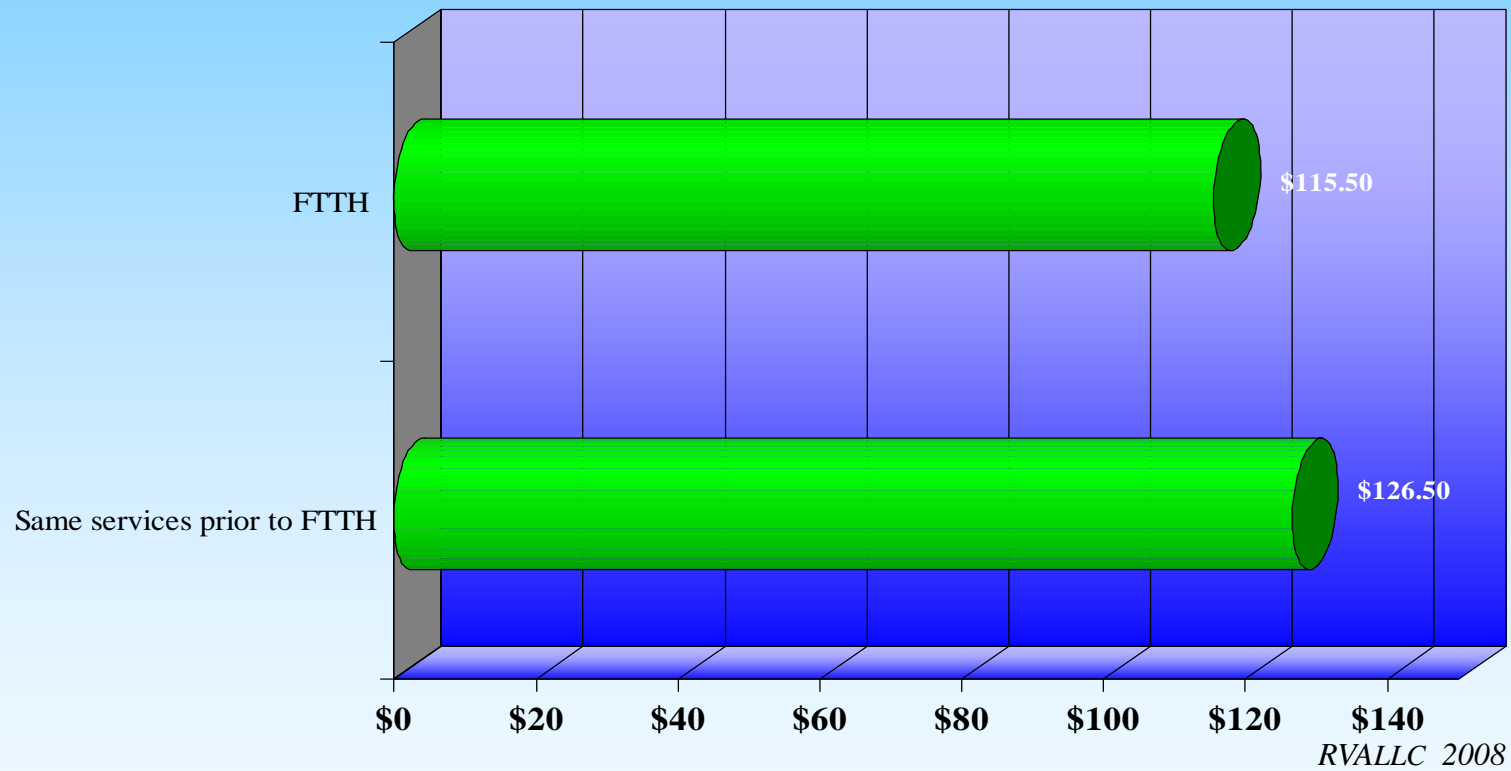


Subscribe To Local Telephone Via FTTH By Age

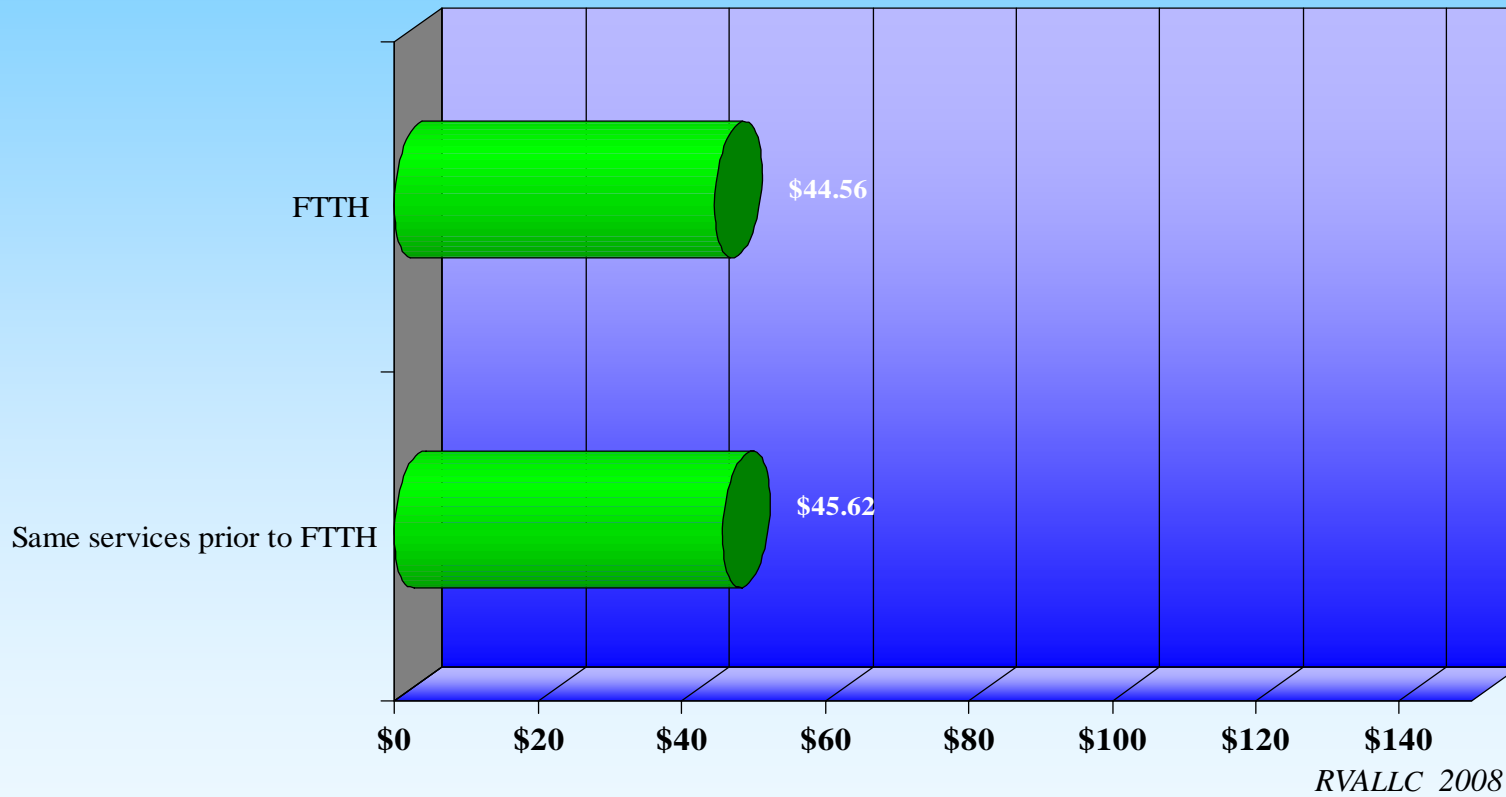


Important: This chart shows the percent *of those in each subgroup* with a given opinion/attribute

Amount Paid For FTTH Services



Amount Paid For Internet Only



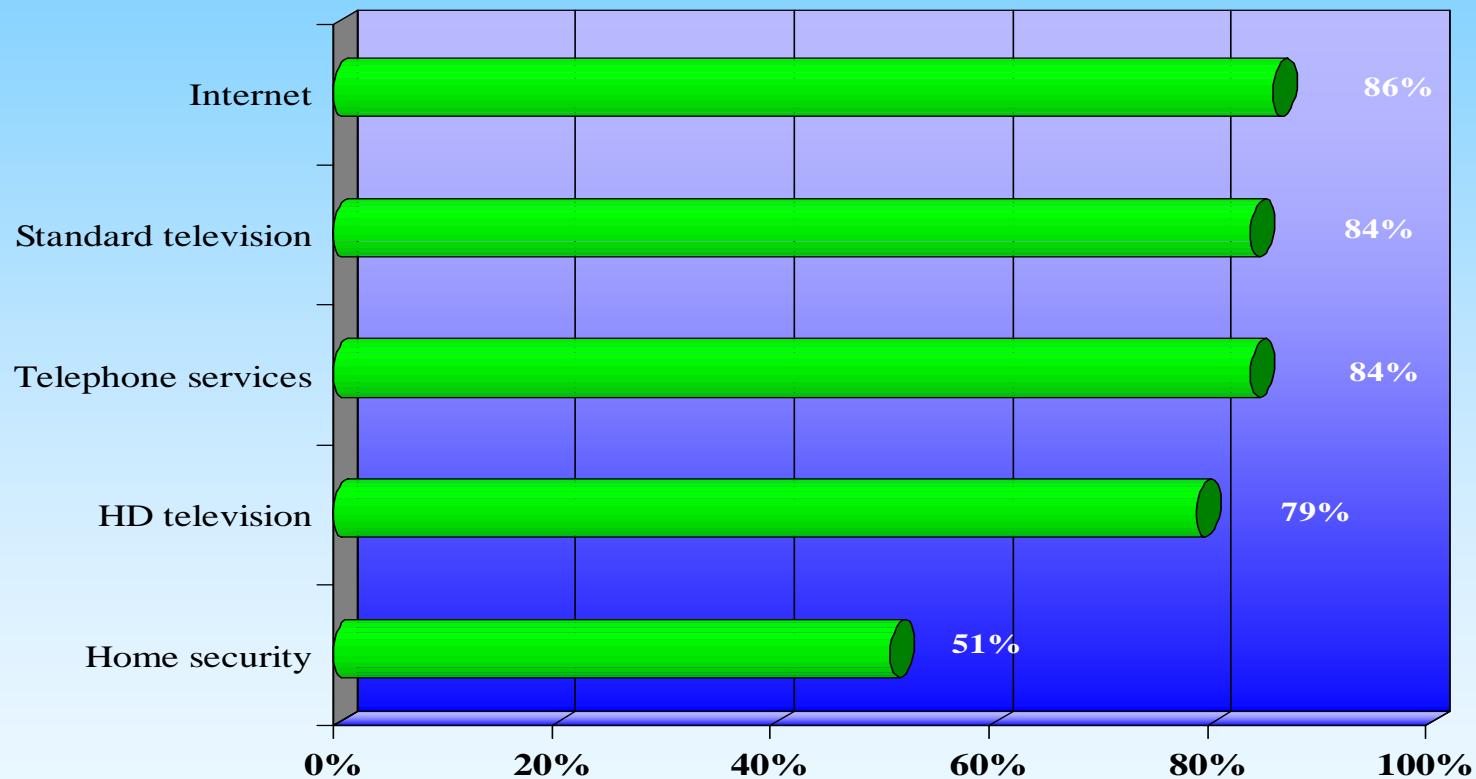
FTTH Customers Reporting Non FTTH Providers Offering Lower Prices Since FTTH Began



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Customer Satisfaction With FTTH Services

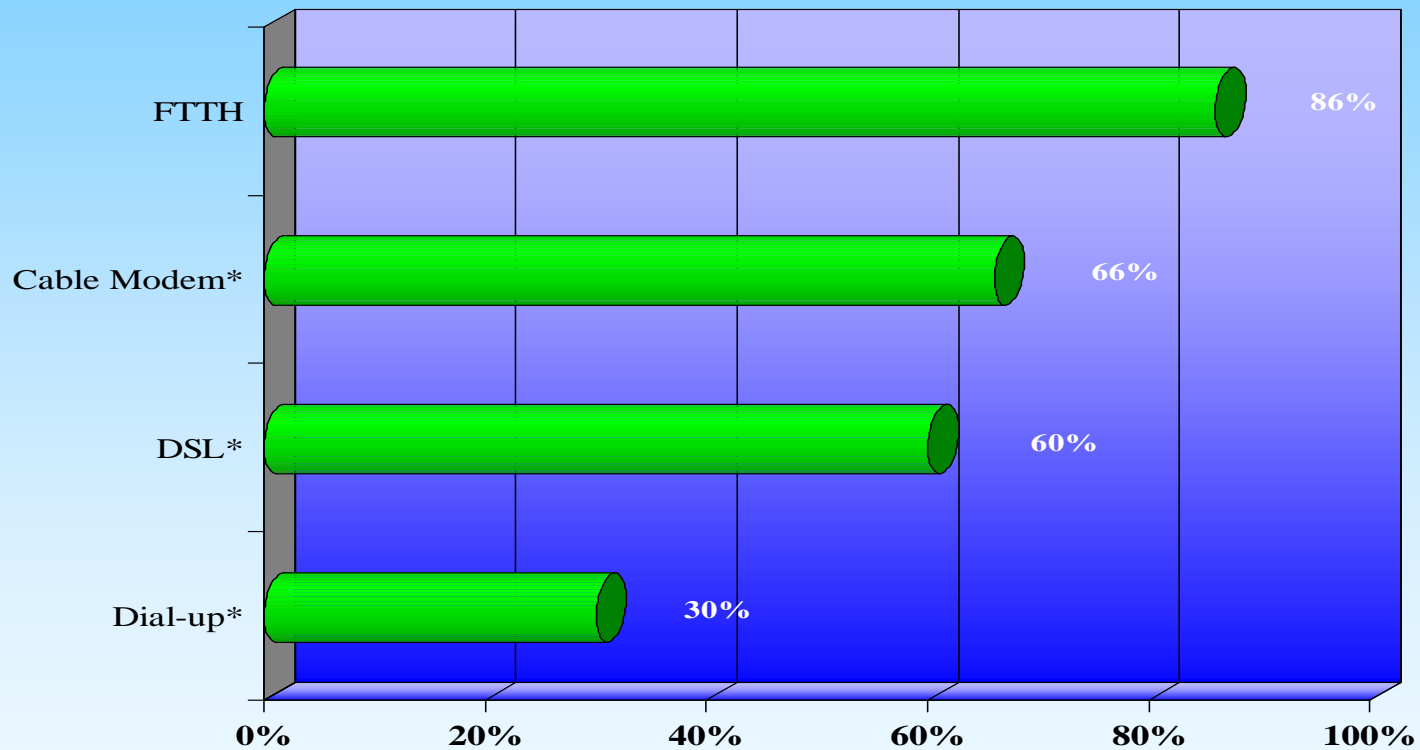
(Those somewhat or very satisfied)



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Internet Customer Satisfaction

Comparison With Other Services (Those somewhat or very satisfied)

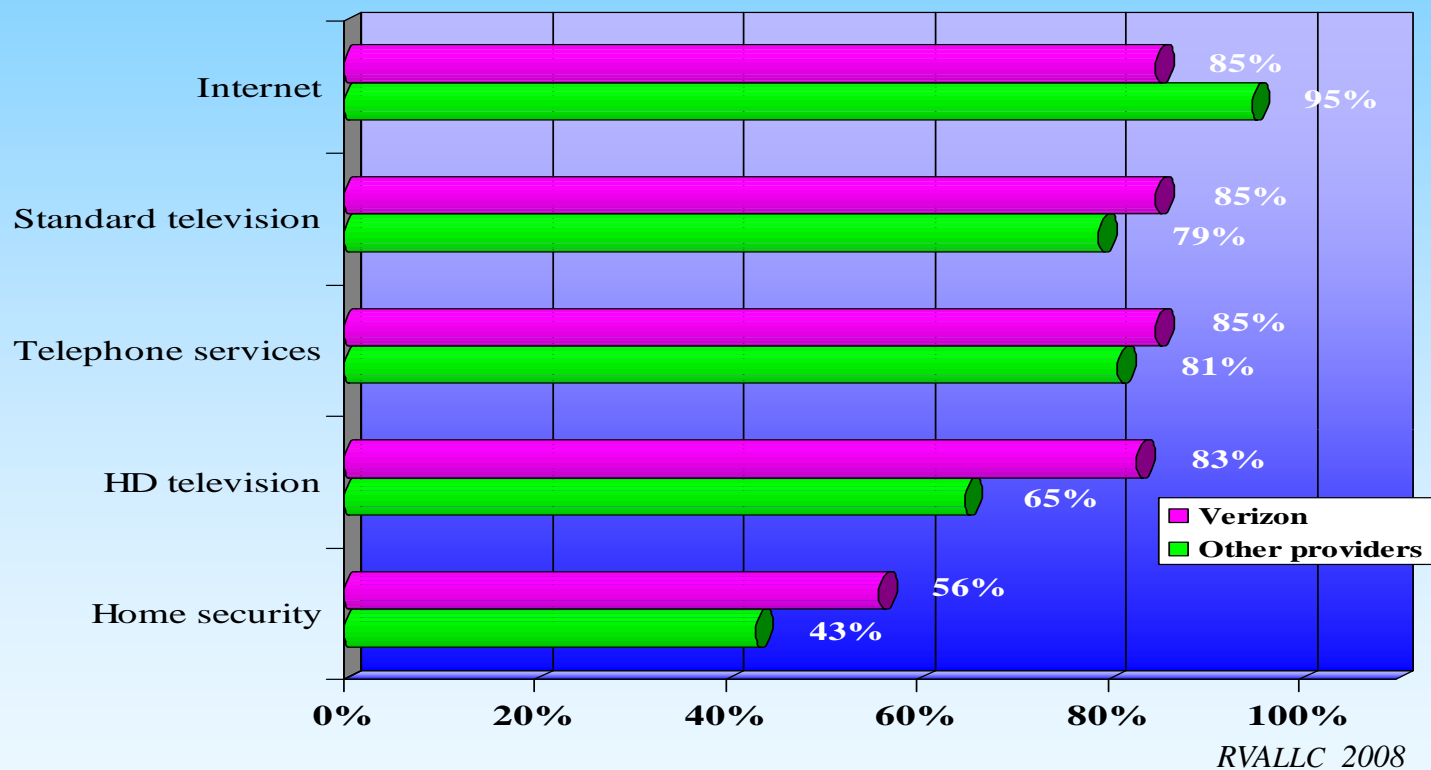


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* From 2006 data

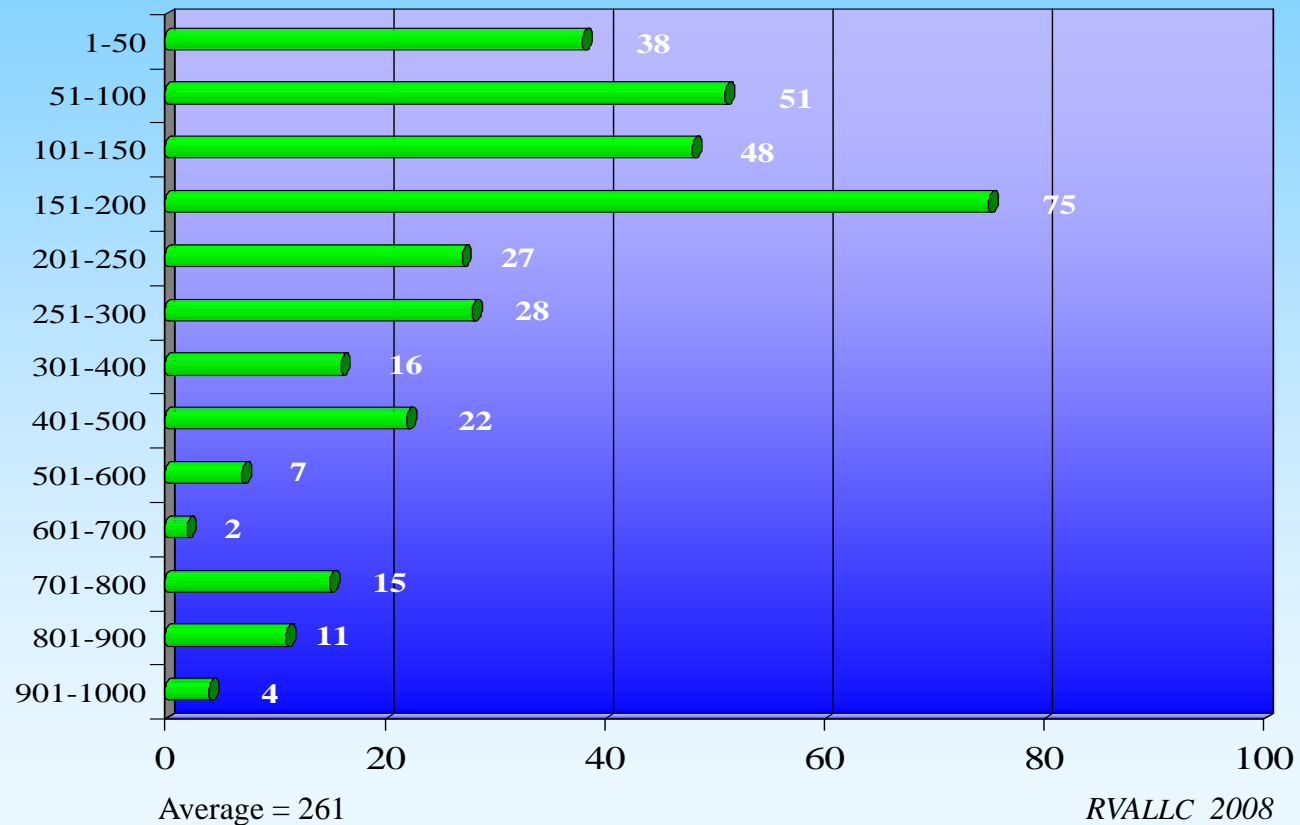
Customer Satisfaction With FTTH Services

(Those somewhat or very satisfied)



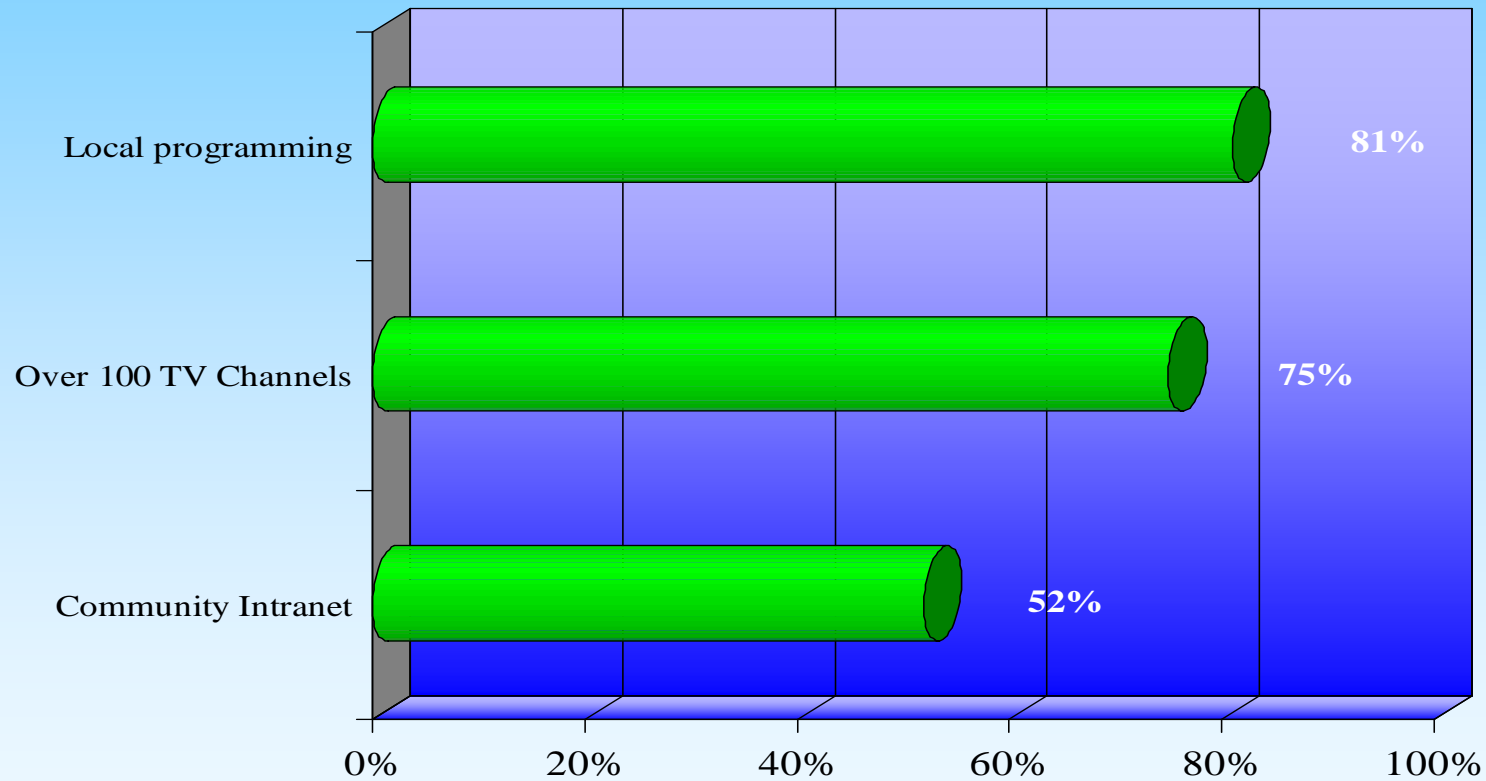
*

Average Number Of Television Channels Subscribed To



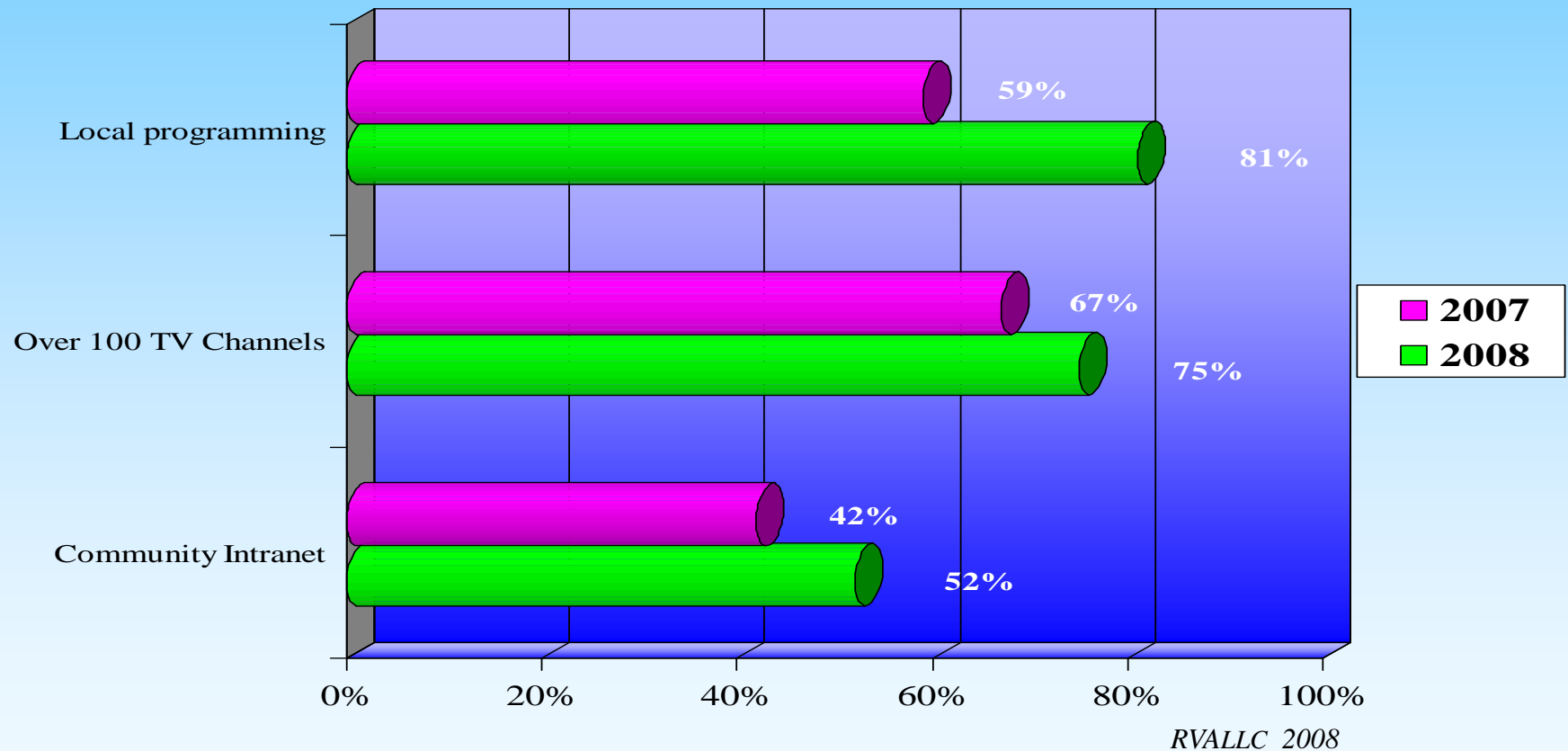
Selected Services Available Via FTTH

Year to Year Comparison

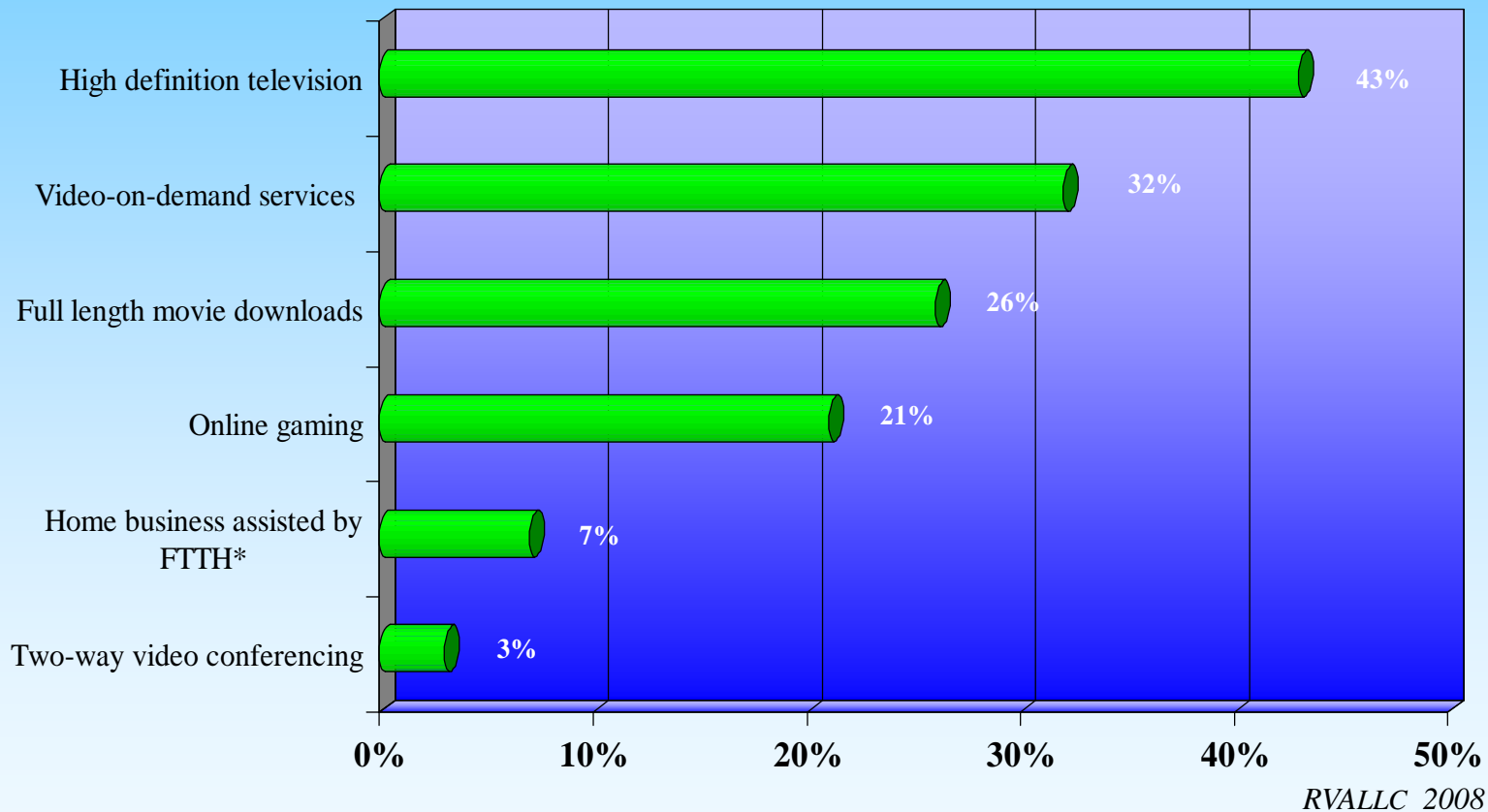


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Selected Services Available Via FTTH Year To Year Comparison



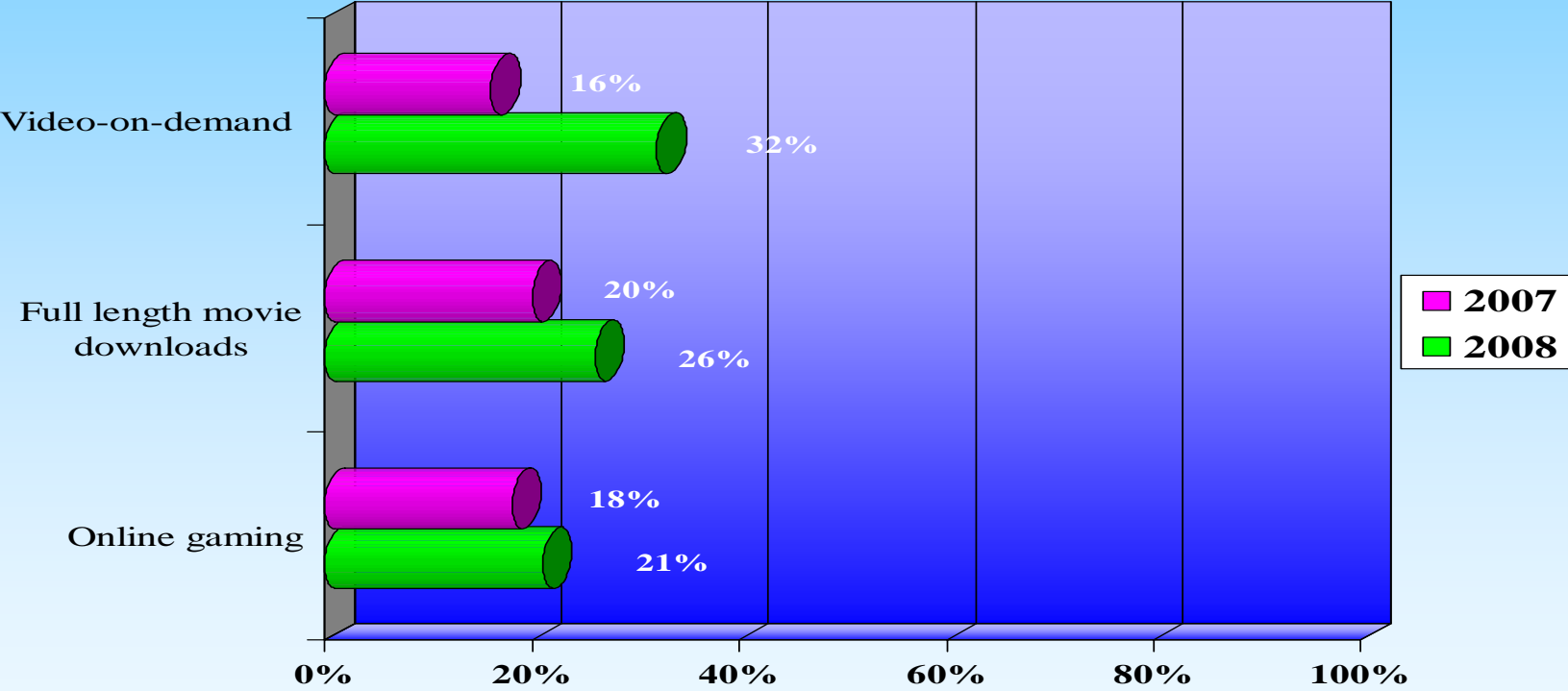
Selected Advanced Customer Uses Of FTTH



* Home businesses more efficient or only possible with FTTH

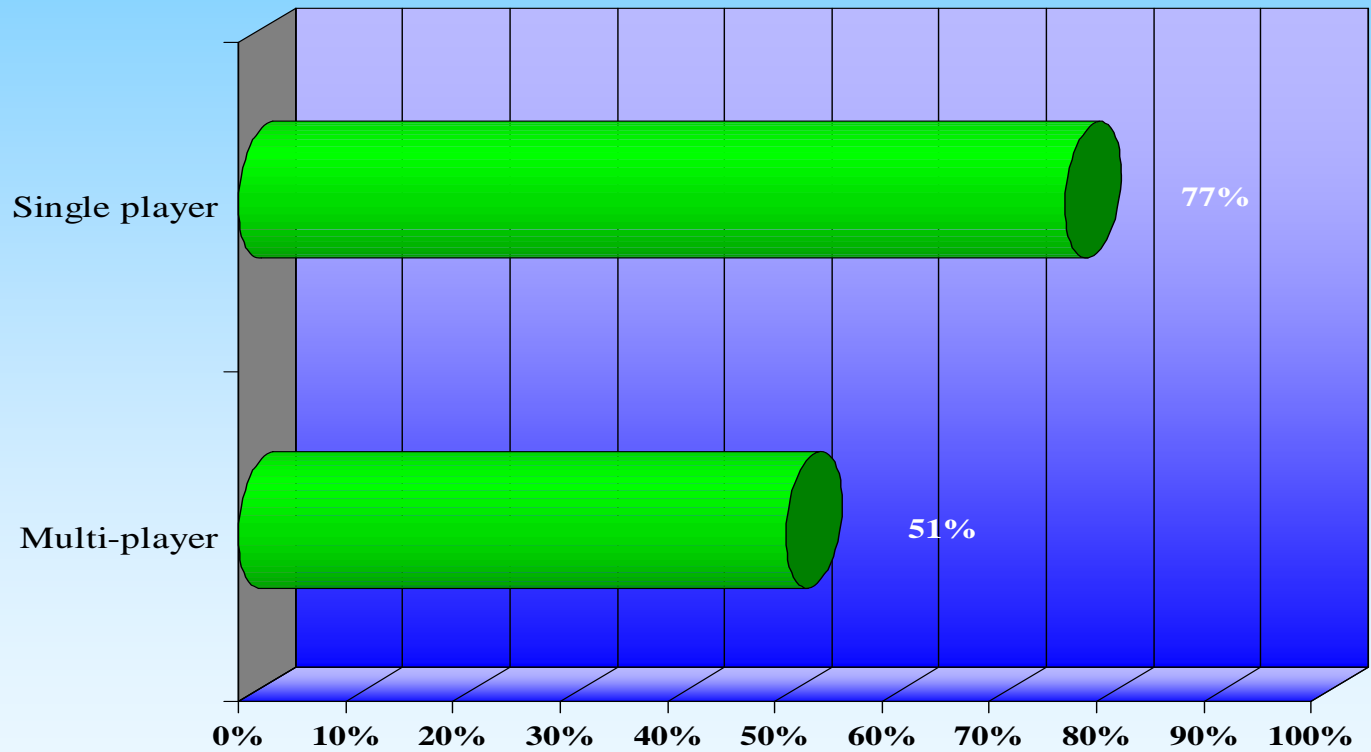
Selected Advanced Customer Uses Of FTTH

Year To Year Comparison



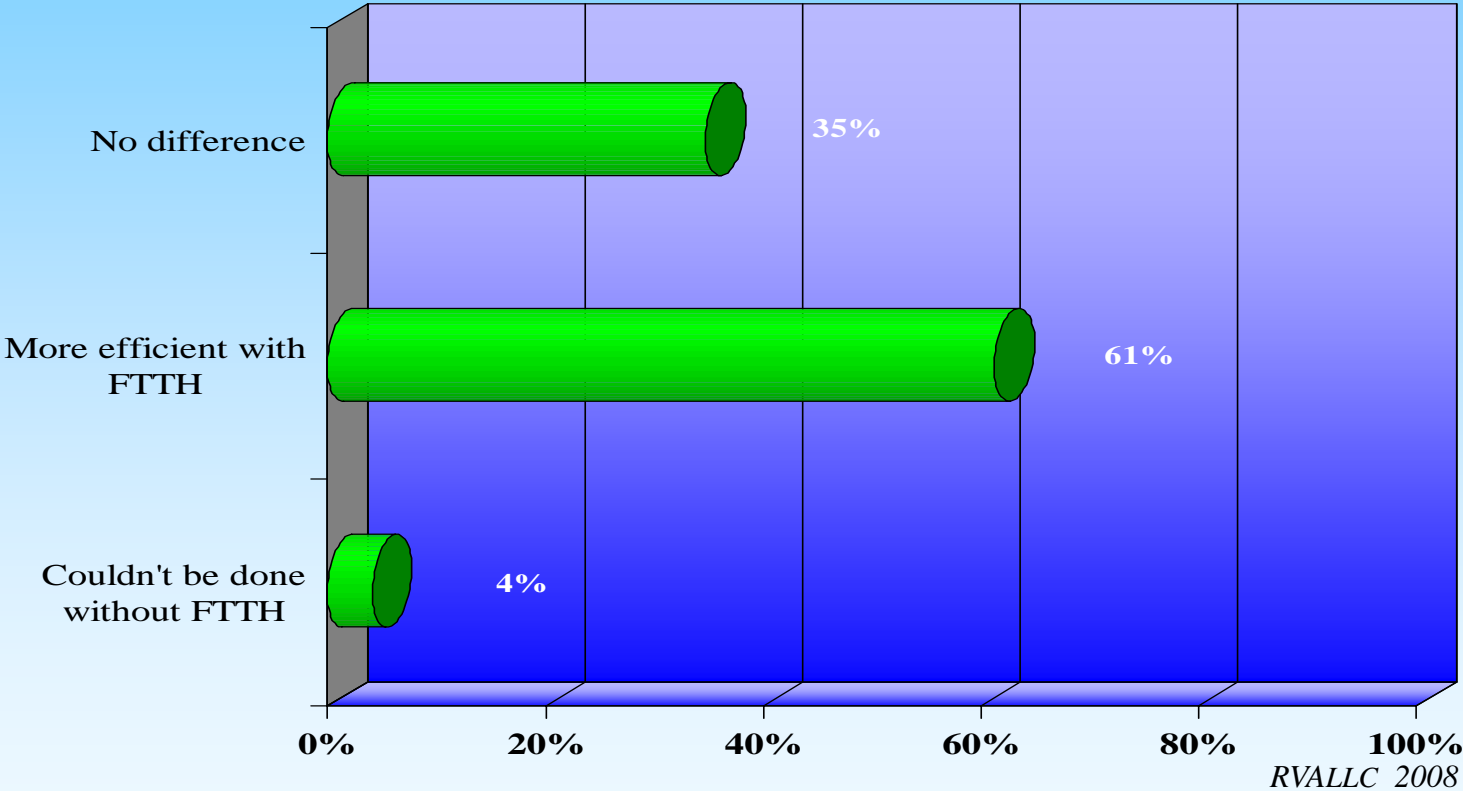
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Type Of Gaming Among Those Using Gaming

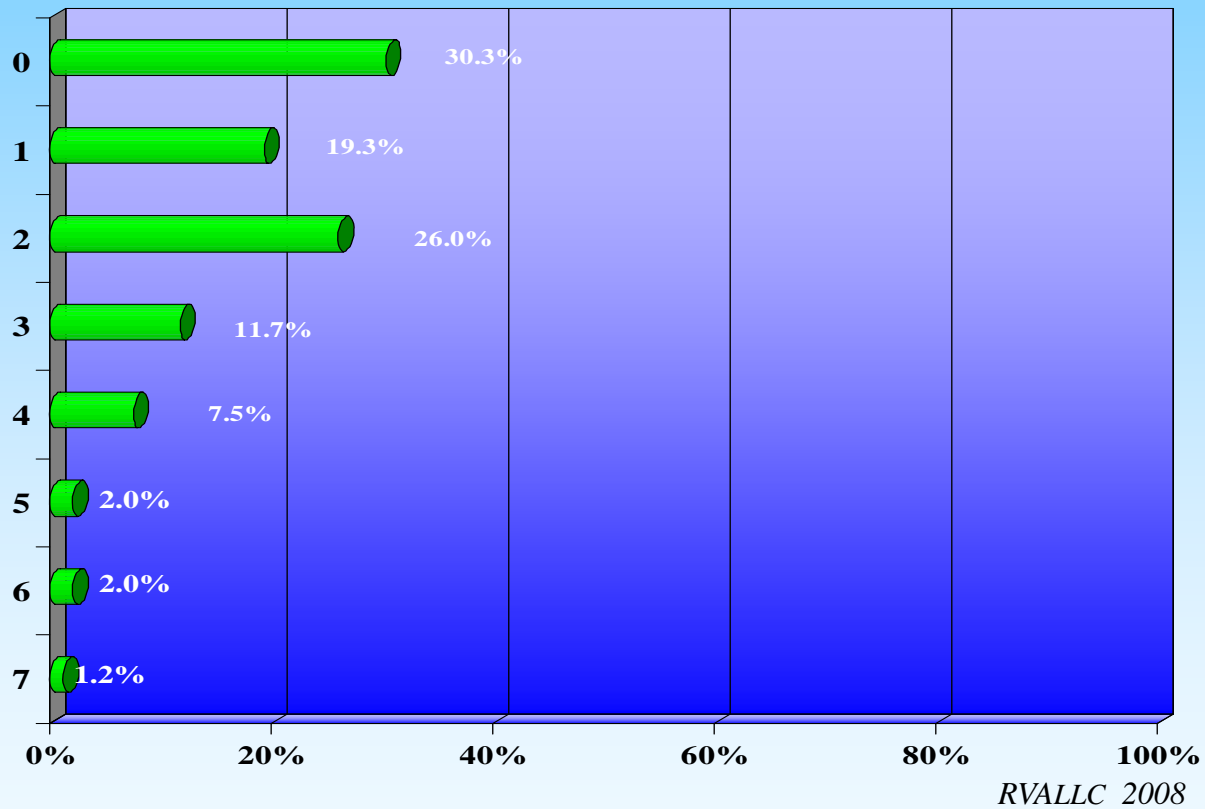


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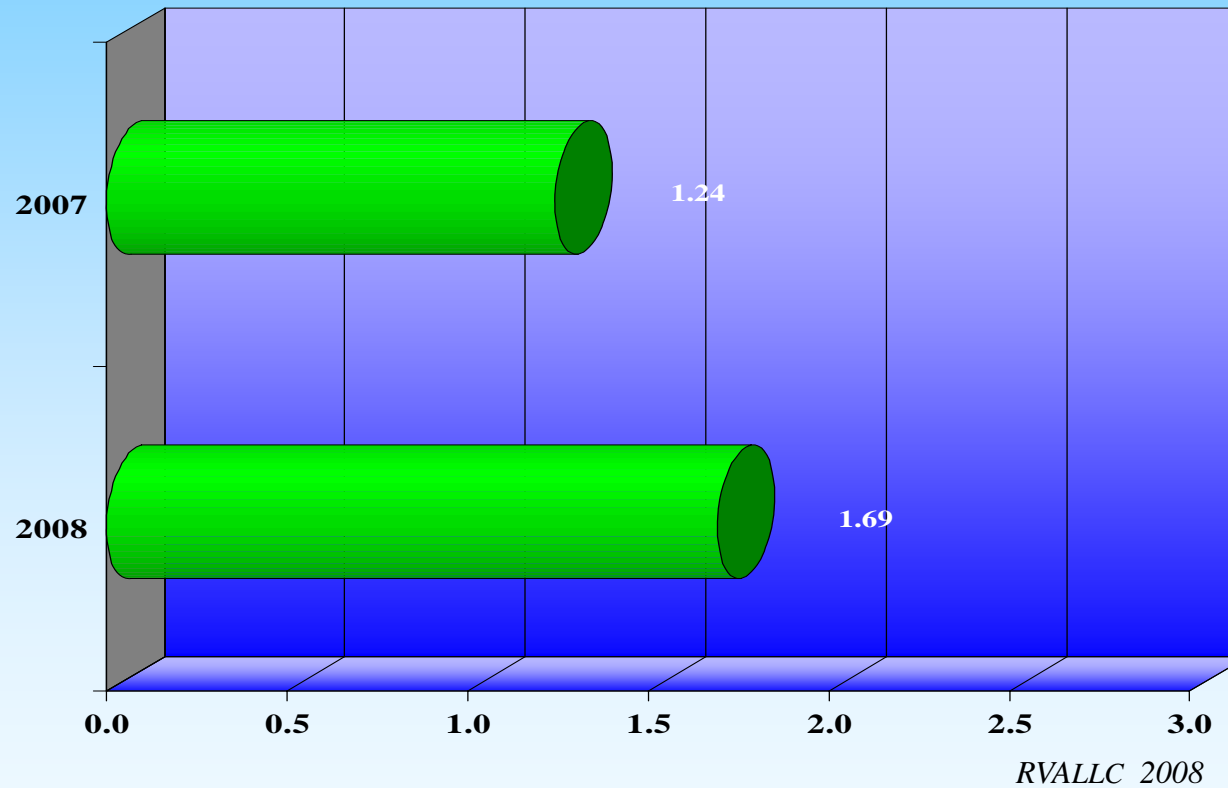
Importance Of FTTH To Home Based Businesses



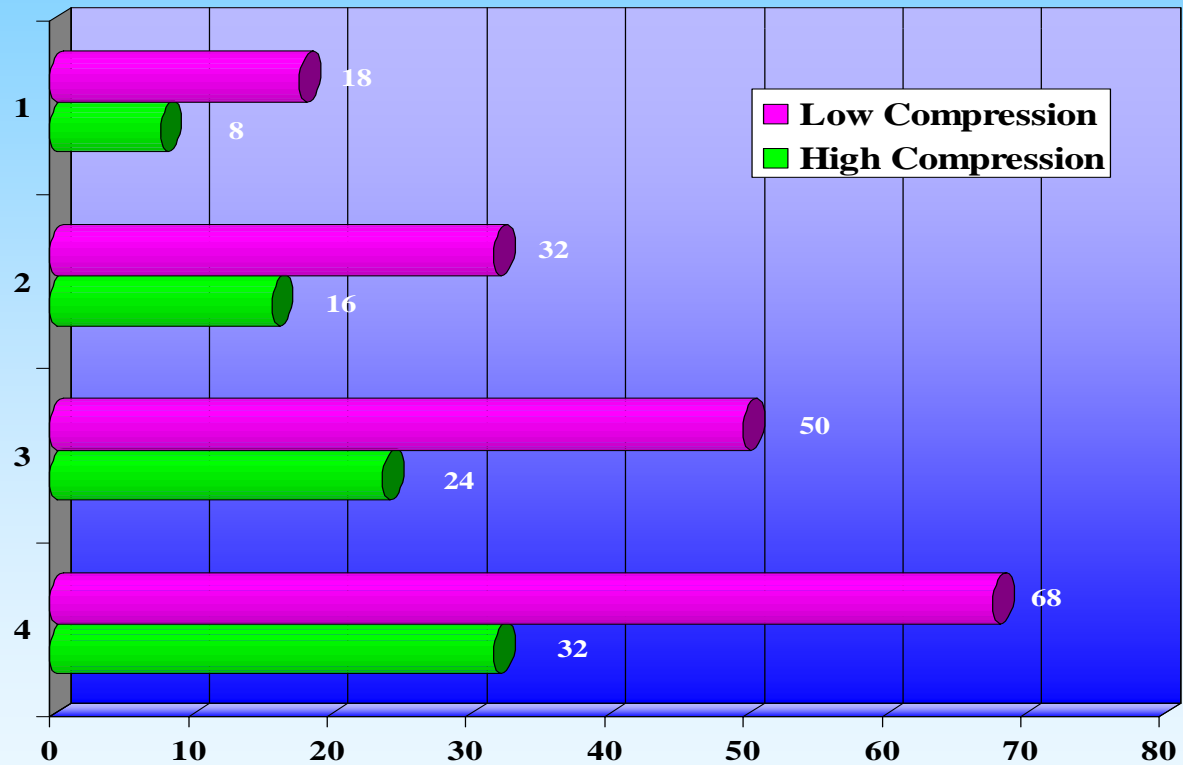
Number Of Customer Owned HD And DVR Devices



Average Number Of HD And DVR Devices In Home

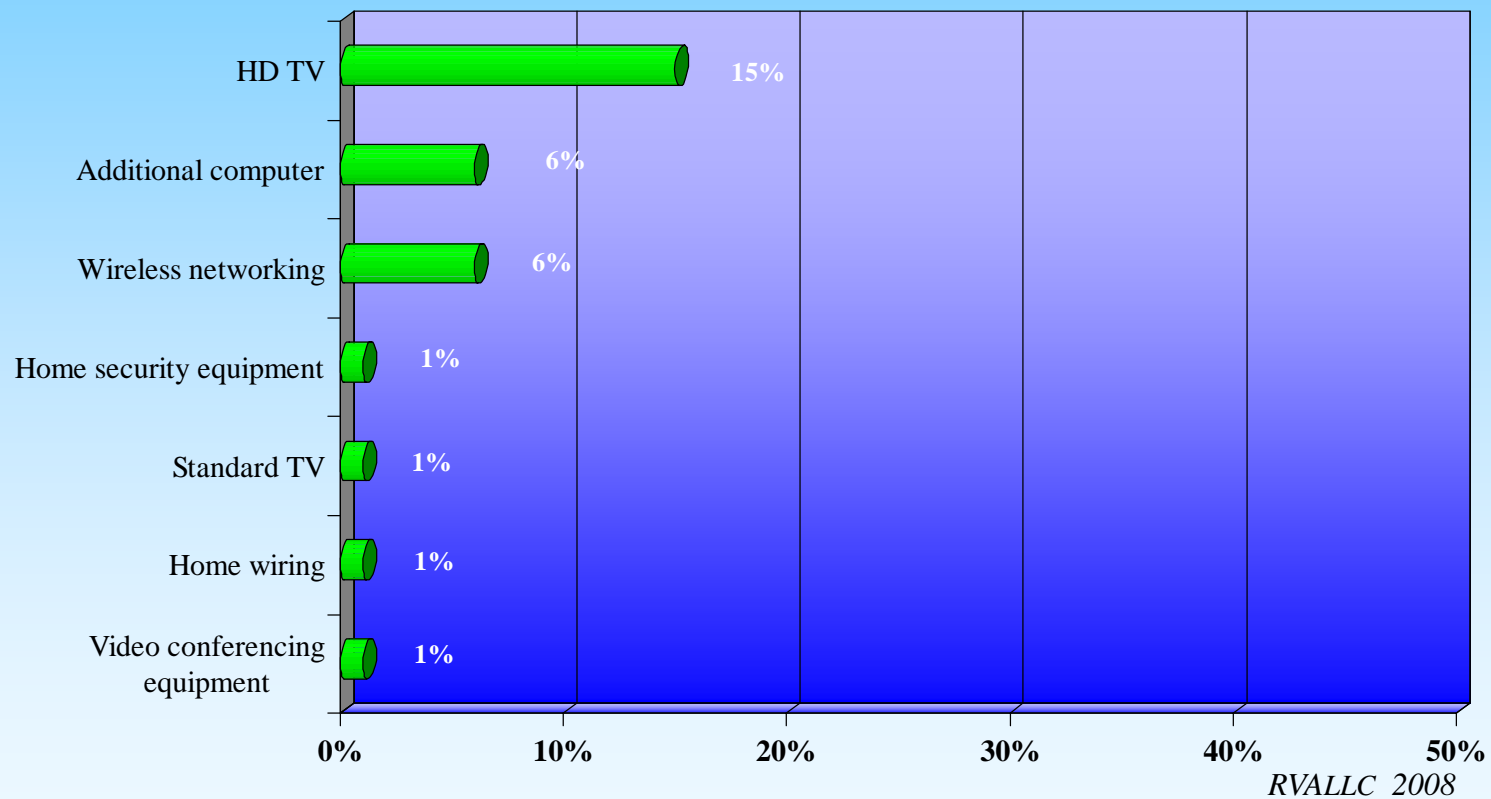


Required Bandwidth When All HD Devices Active (HD TV and DVR)



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Electronics Purchased Directly As A Result Of FTTH



2008 Research Continues To Show FTTH Users Work Approximately One Additional Day Per Month At Home Because Of FTTH



Change In Work From Home:

- 9% work more from home directly because of FTTH – average of 11 days more

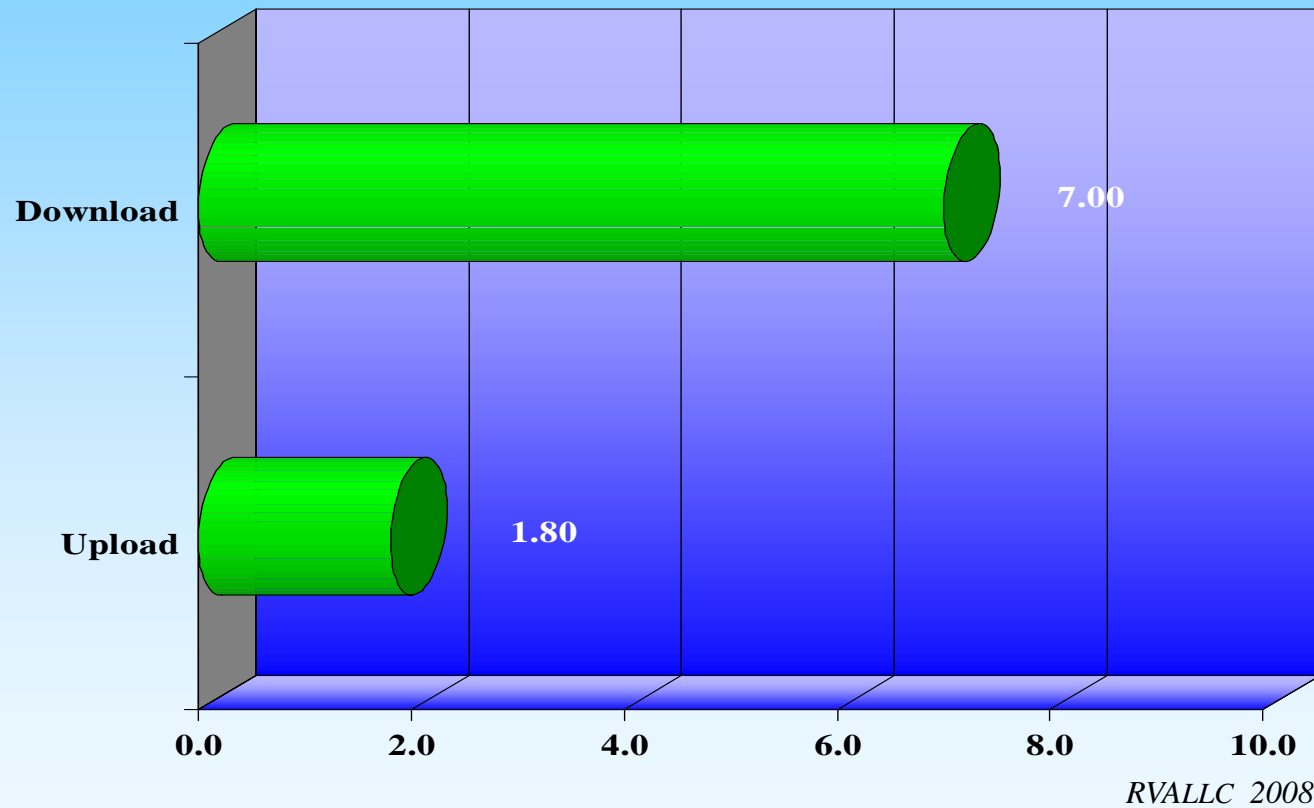
2008 Research Continues To Show That FTTH Users Work About One Additional Day Per Month At Home Because Of FTTH



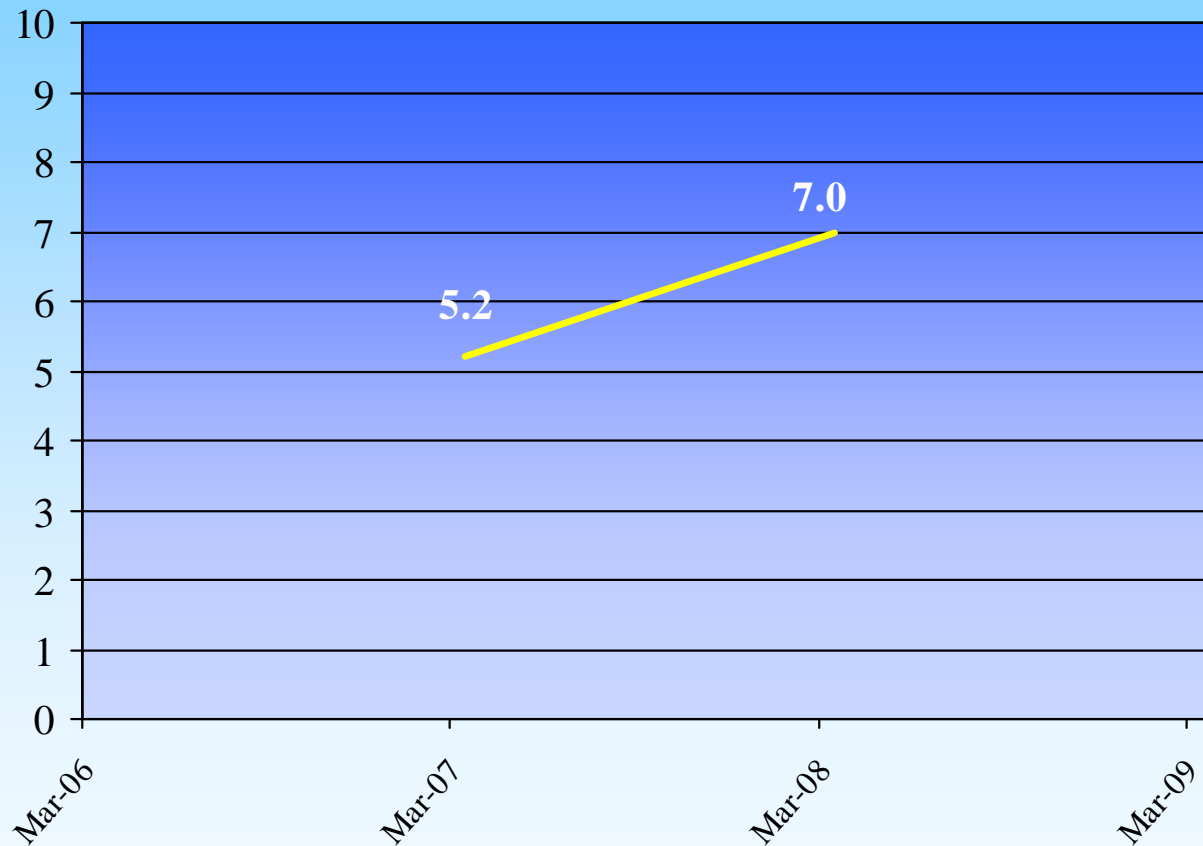
If everyone had FTTH...

- 5% reduction in gasoline use
- 4% reduction in CO2 emissions
- \$5 billion in lower road expenditures
- 1.5 billion commute hours recaptured
- Direct savings to business

Median Tested Internet Speeds



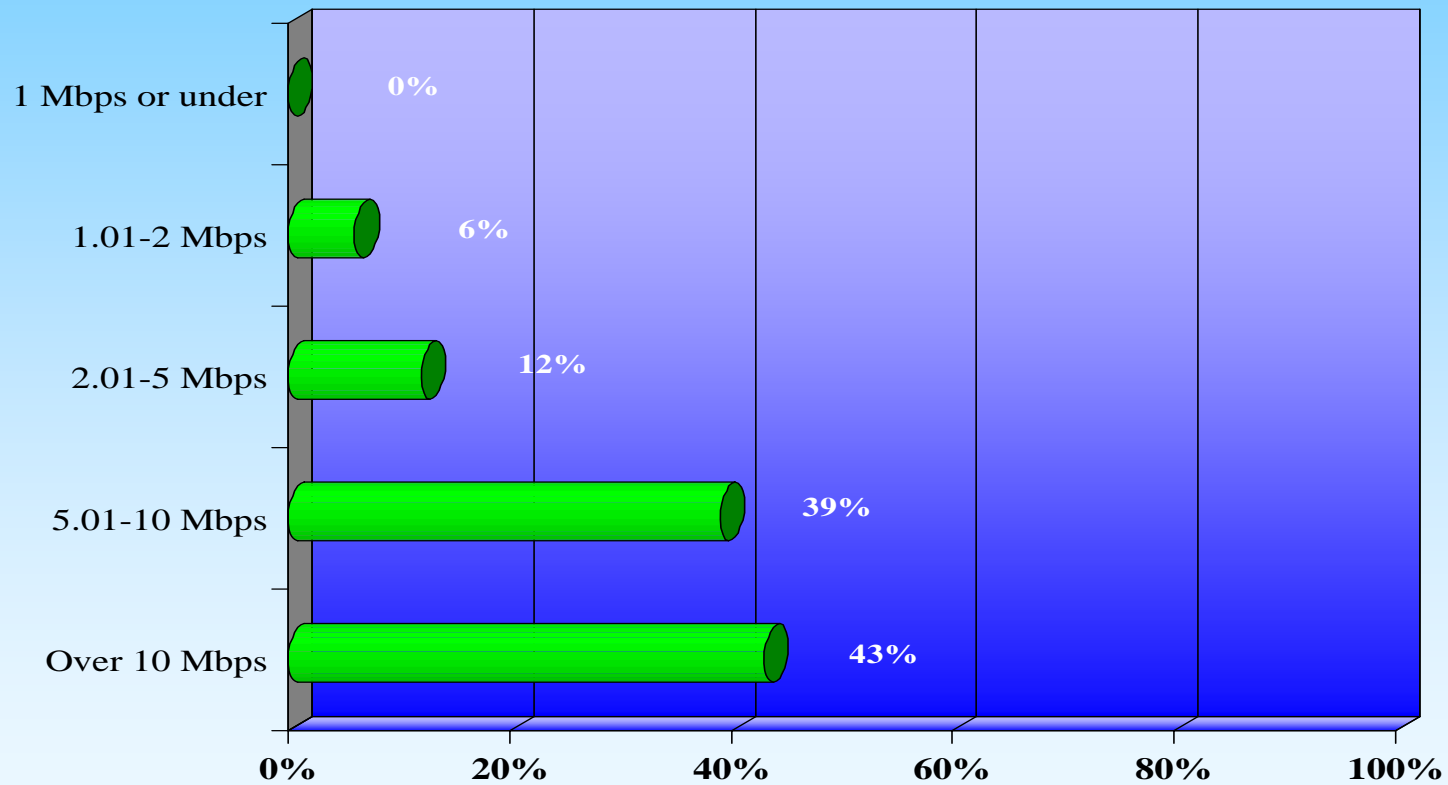
FTTH Median Tested Download Internet Speed (Mbps)



(All Broadband was 1.9Mbps in June 2007 Per CWA using a non scientific sample)

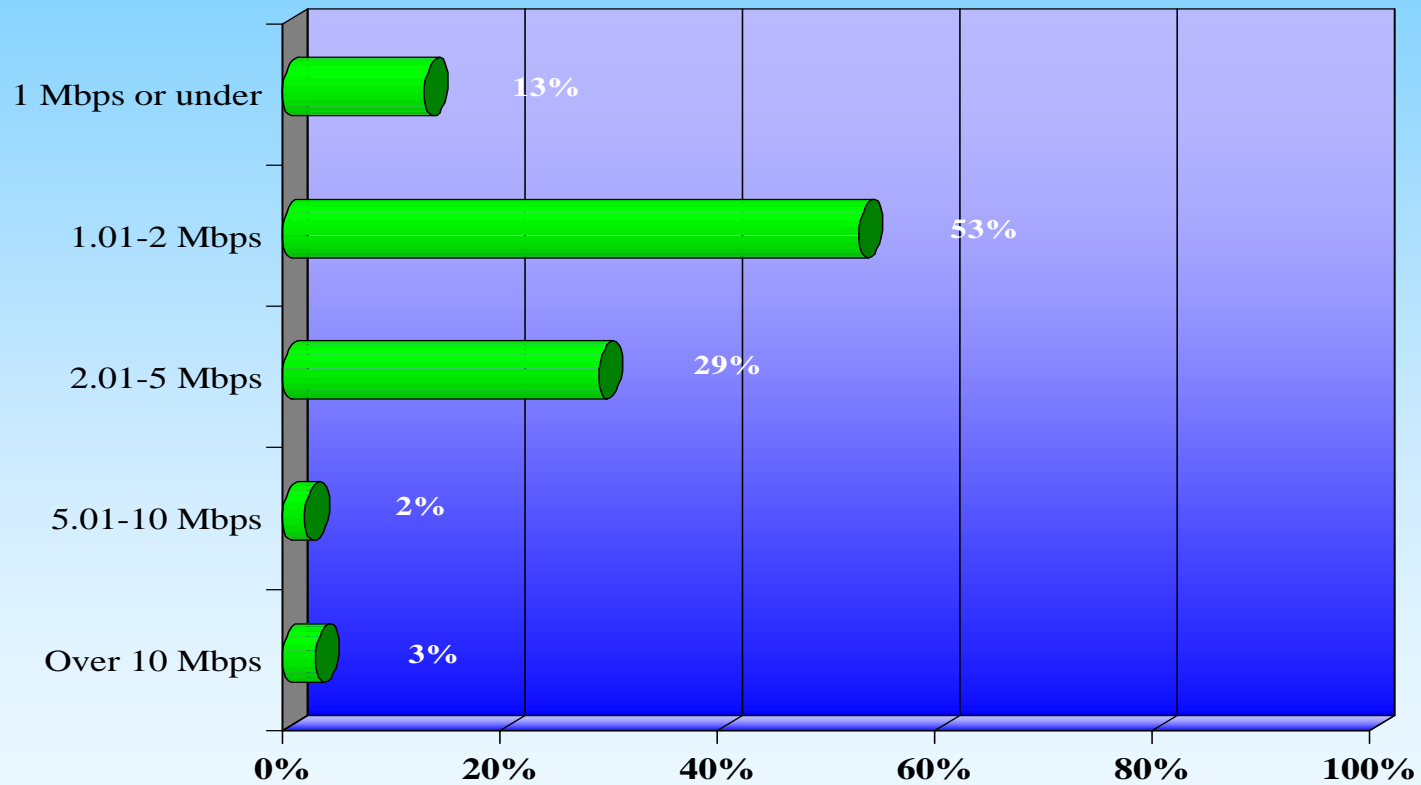
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Actual Customer FTTH Internet Download Speeds



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Actual Customer FTTH Internet Upload Speeds

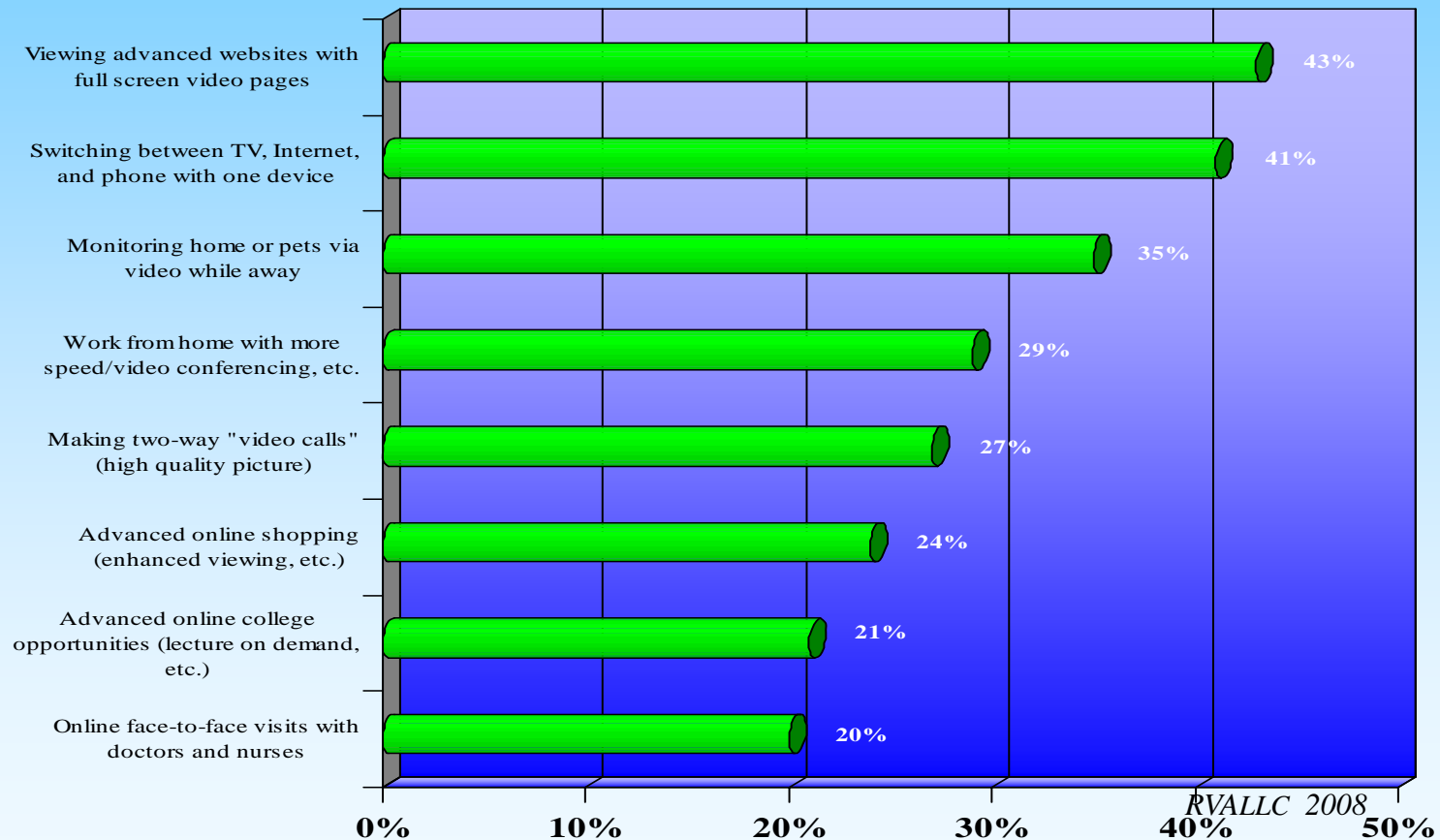


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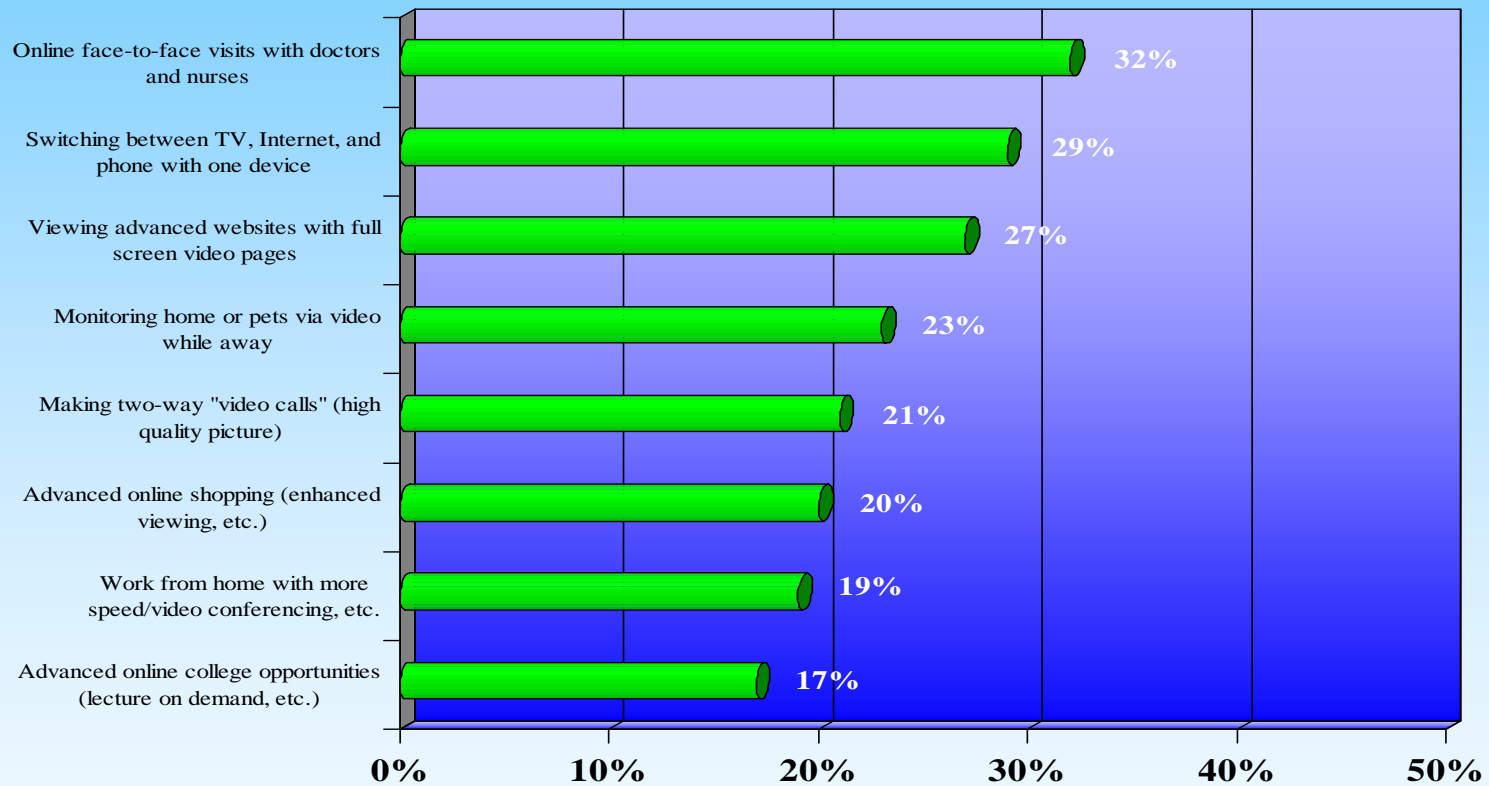
Examples Of Life Changing FTTH Applications Simply Not Possible With Any Other Infrastructure

- Teachers utilizing two-way video conferencing from home to teach Korean students English (in off hours, i.e. time difference) (Powell Wyoming)
- Scientist working as a NASA consultant from a rural location (Washington State)
- Elementary student requiring isolation for a rare skin disease being able to participate in local classwork via two-way video. (Salem IL)
- Grandparents to Grandkids cross country “board game night”

Percent Viewing Future Non Entertainment FTTH Applications As Important Among Those Under 35



Percent Viewing Future Non Entertainment FTTH Applications As Important Among Those 55 And Over



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Current FTTH Status Among Consumers

- Positives of FTTH status
 - Recognized as clearly superior broadband by those who experience it
 - Is clearly facilitating a better video entertainment experience
 - Is facilitating price competition
 - Is facilitating more work from home (and green advantages)
- Negatives of FTTH status
 - It does not have a household name
 - Few absolutely unique apps yet: Two way video use is rare
 - Primary demographic is older affluents (who do not pioneer apps)
 - Many younger affluents are still pinning their hopes on wireless

Recommendations

- Bring FTTH satisfaction rates into the sunshine
 - Consumer Reports
 - Changelog
 - RVA
- Bring tested data rates into the sunshine
 - Scientific testing of other system data rates?
- Highlight unique non entertainment applications in PR
 - Examples like Powell and Salem (video?)
 - Leading interest in coming applications
 - Older: Digital medicine and true convergence
 - Younger: Rich media and true convergence

Recommendations

- Win the hearts and minds of the young
 - Background market research
 - PR campaign using latest tools
 - Reposition FTTH as newer and cooler
 - Packages for young people
 - Wireless in package
 - Unique TV programming
 - Use entry's like movie downloading, gaming



FTTH/FTTP Consumer Study

May 2008

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