

MetaFacts, Inc.



Roadblocks on the Information Highway

Barriers to adoption of technology products

A study conducted by

Metafacts, Inc

for the

AMD GCAB

Technology Terminology & Complexity Study

July 2003



Contents

- Objectives of study
- Methodology
- Respondent profile
- Key findings
- Technology affinity segments

Objectives of Study

- To answer these questions and test key hypotheses:
 - Are consumers delaying adoption of technology products because the products and terminology are too complicated?
 - Are some products being delayed more than others because of this?
 - Are some products considered more complicated than others?
 - Are some consumers different than others in this respect?
 - Are consumers delaying adoption of technology products because the products and terminology have exceeded the limits of their technology literacy or knowledge?
 - Which terminology is the most challenging?
 - Which consumers are the most challenged?

Methodology

- Large-scale consumer survey
 - 1,535 total surveys
 - 893 surveys in the U.S., 220 in the U.K., 210 in Japan, and 212 in China (Guangzhou, Shanghai and Beijing)
 - Broad, representative range of population within each country
- Paper surveys fielded by mail
 - Because of objectives and subject, paper surveys sent by mail were used to avoid built-in sample bias from internet-based study
- Close-ended survey
 - All questions were multiple choice or attitudinal rankings
- Range of technology products and terms
 - Products ranged from more mature products such as Televisions, Telephone and Microwave Ovens through PCs, Cell phones, PDAs and PVRs
 - Technology terms were selected from prominent, typical technology product advertisements
 - Examples include Megahertz, megapixel, Bluetooth, MP3 and download
- Ratings of two typical product manual pages
 - Respondents were asked to review and rate a page from two different product manuals
- Surveys were localized for each country
 - Surveys were translated in each country, then back-translated for comparison, and adjusted as needed

Methodology

- Analysis of sub-populations based on their attitudes
 - Confusion
 - Those that find technology products more confusing than others do
 - Half strongly agreed with 4 or more of 14 statements about technology products
 - Complicated technology products
 - Those that find technology products more complicated than others do
 - Half said that 1 or more of 10 technology products was very or extremely complicated
 - Knowledge
 - Those that could correctly identify more technology term definitions than others
 - Half could correctly identify the definitions of 6 or more of 11 technology terms
 - Purchase delays due to complication
 - Those that delay purchasing technology product because of its complication
 - Half said they had delayed purchasing at least 1 of 10 technology products
- Analysis of sub-populations based on their behavior
 - Home PC Users
 - Have or haven't used a home PC in the last 3 months
 - Internet users
 - Have or haven't used the Internet in the last 3 months, at home or elsewhere
 - Cell phone users
 - Have or haven't used a cell phone in the last 3 months
 - Delayed buying a PC because it was too complicated
 - Delayed acquiring Internet service because it was too complicated

Methodology

- Respondents segmented by Technology Affinity into six unique segments
 - Attitudes about technology
 - Technology knowledge
 - Number of correct answers selected from multiple-choice definitions of widely-publicized and advertised technology terms
 - Number of technology products used
 - Number of technology products planned to be acquired in next 12 months
 - Perception of complexity of technology products
- Cluster analysis
 - Respondents with similar answers are grouped together
 - Segments unique and separate from other segments
 - Using Euclidean distance

Respondent profile – Whom Did We Survey?

- Age mix
 - 35% Age 55+
 - 20% Age 45 to 54
 - 21% Age 35 to 44
 - 24% Age 34 and under
- Gender blend
 - 38% Male, 62% Female
- Household size
 - 23% 1 person
 - 29% 2 persons
 - 48% 3+ persons
- Educational levels
 - 31% High school or less
 - 34% Some college
 - 24% College graduate
 - 10% Post-graduate
- Countries
 - 58% US (893 respondents)
 - 14% UK (220 respondents)
 - 14% Japan (210 respondents)
 - 14% China (212 respondents)
 - Shanghai, Beijing, Guanzhou



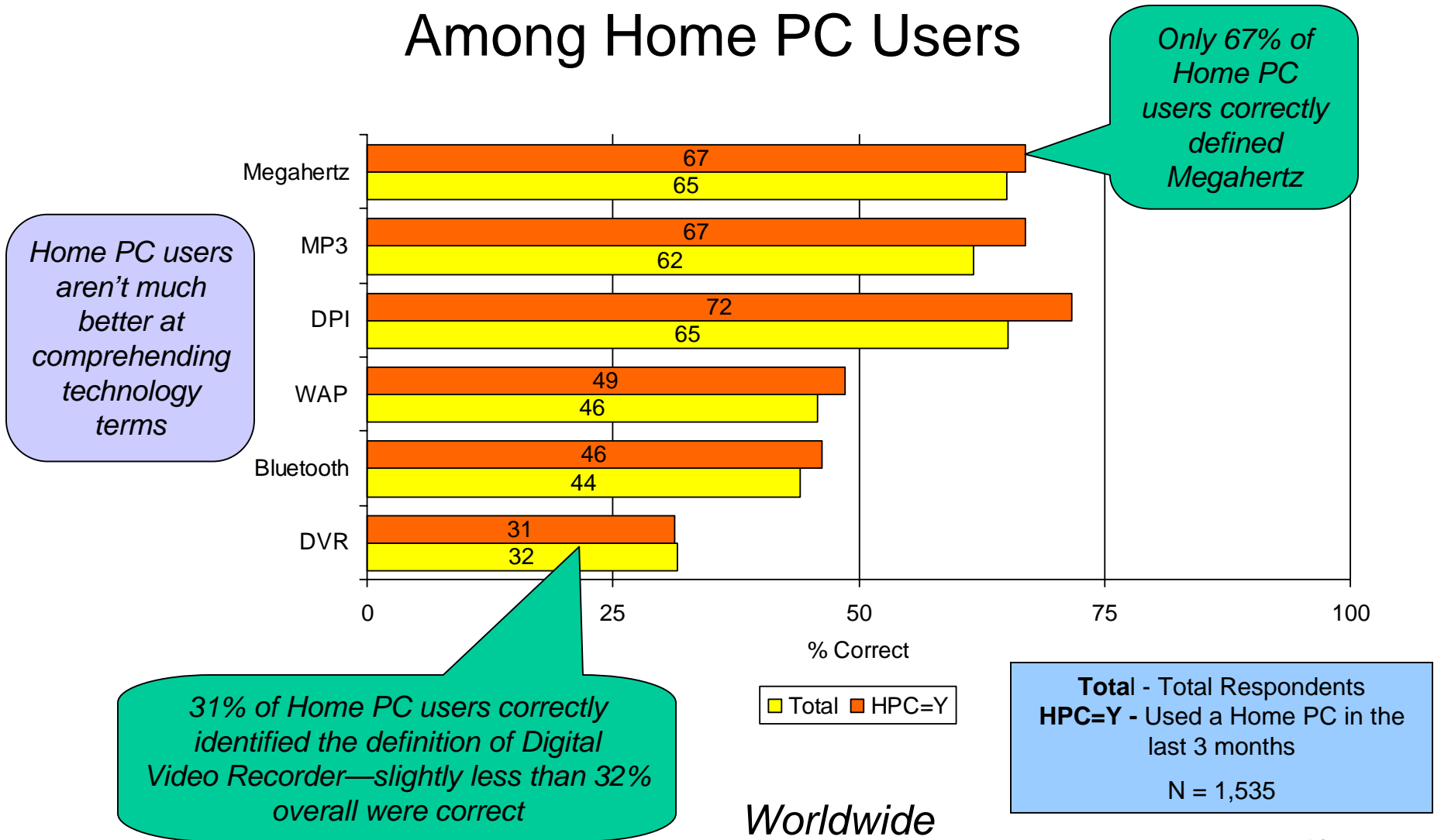
Technology Terminology is Little-Understood

- Only 3% “aced” the quiz, correctly identifying 11 of 11 multiple-choice definitions for various technology terms
 - Most respondents got only 7 or fewer correct
 - Less than one quarter (22%) got 5 or fewer
 - Less than one tenth (9%) got 3 or fewer

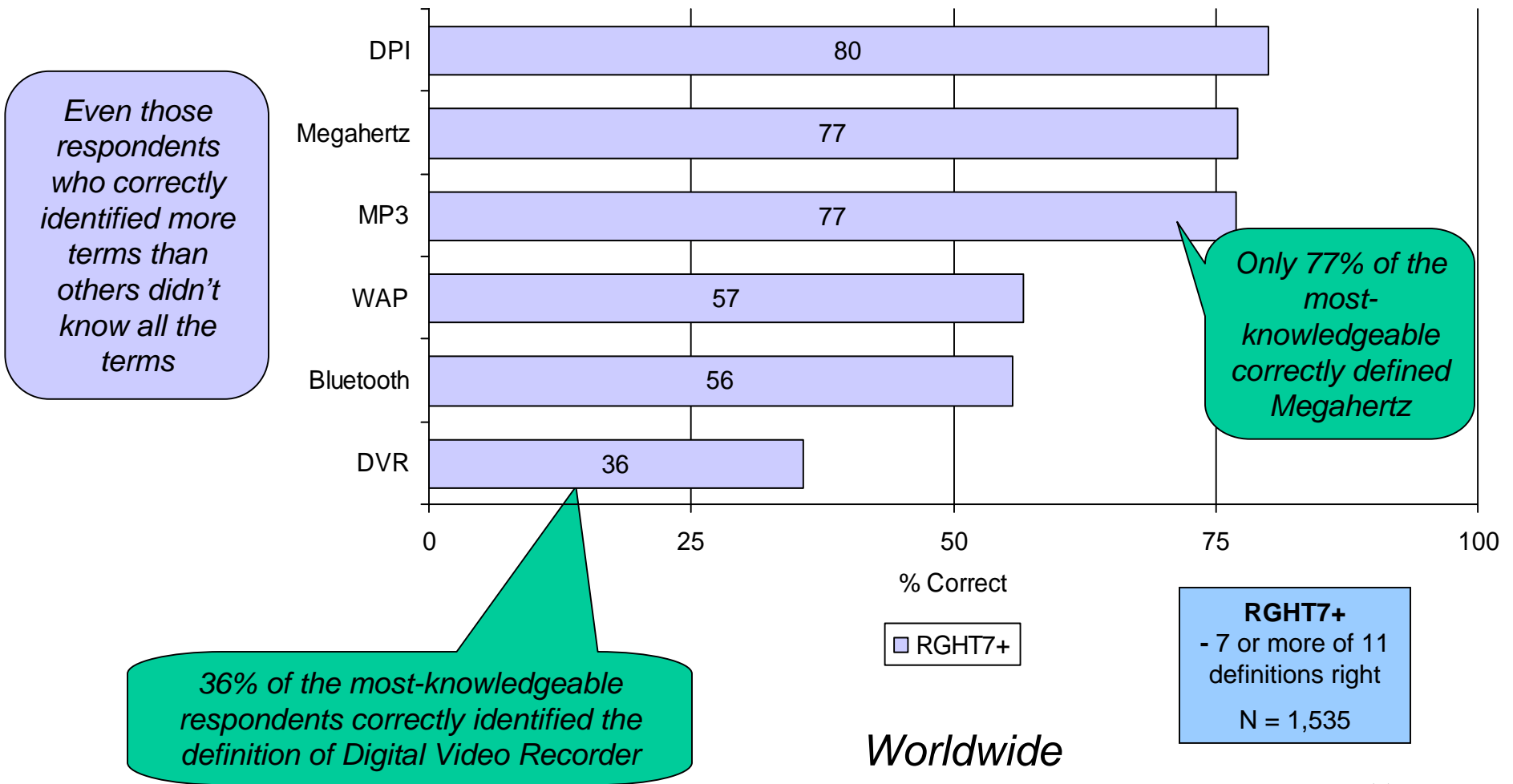
Terminology is Confusing Buyers and Delaying Purchases

- The basic terms technology companies use to advertise and differentiate their products aren't well understood
 - The term “Megahertz” is understood by less than two-thirds (65.1%) overall
 - Not even among the most knowledgeable
 - Not even among long-time PC users
 - “Bluetooth” and “WAP” are little-known, correctly identified by less than half

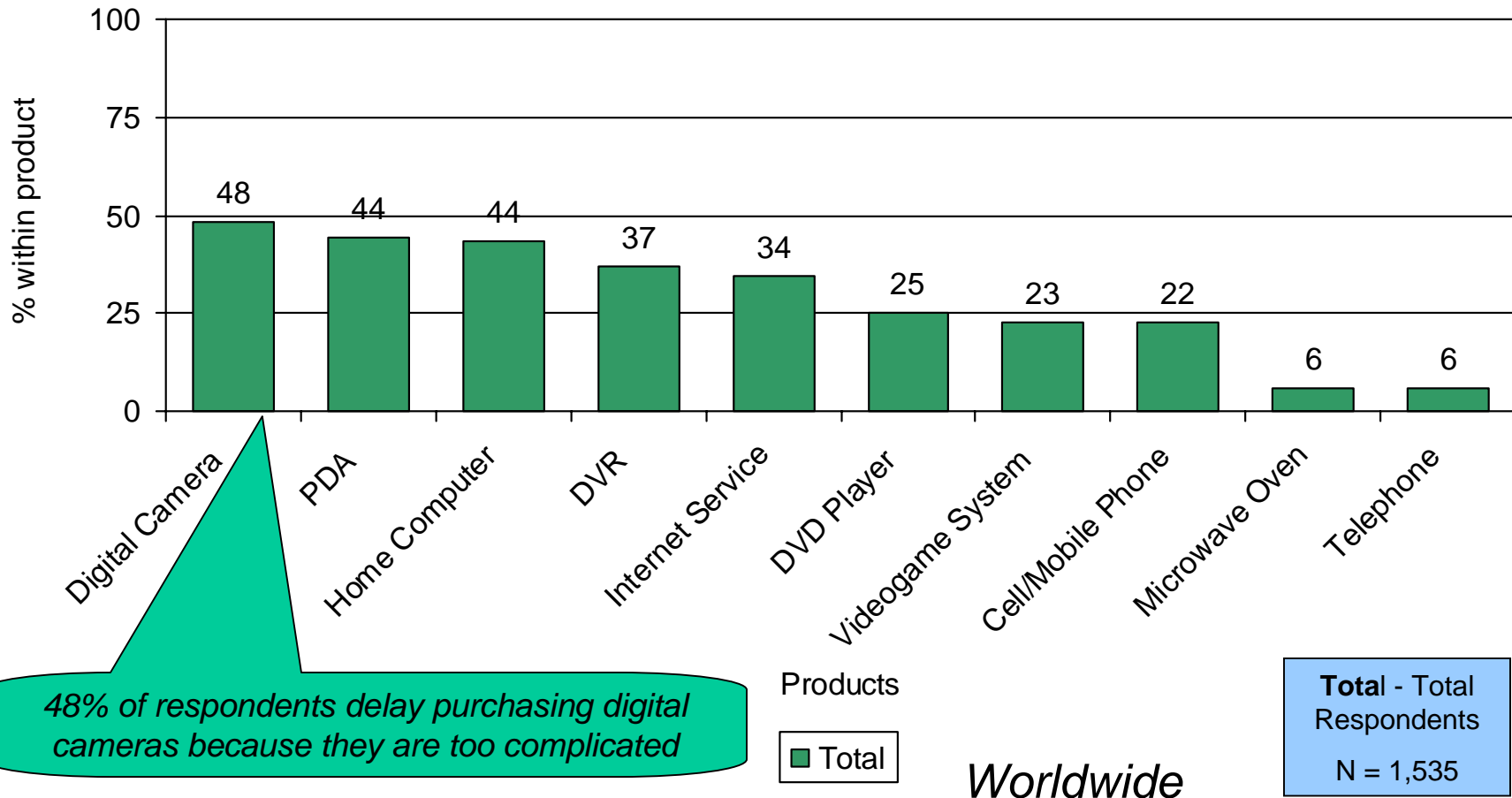
The Least Understood Technology Terms Among Home PC Users



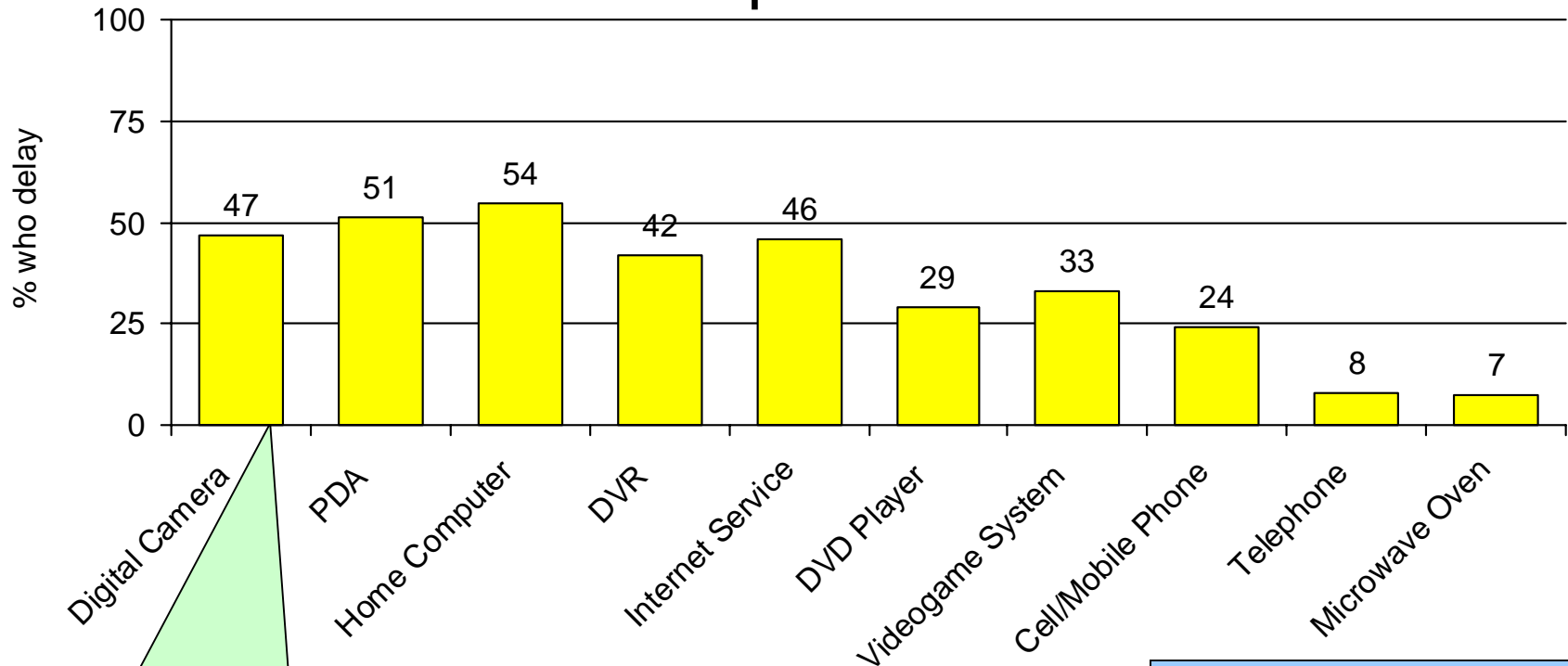
The Least Understood Technology Terms Among the Most-Knowledgeable



Buyers Delay Technology Products Purchases Because they are too Complicated



The Least Knowledgeable Delay Their Technology Purchases Because Products are Complicated



47% of those that are least knowledgeable about technology terms delay purchasing digital cameras because they are too complicated

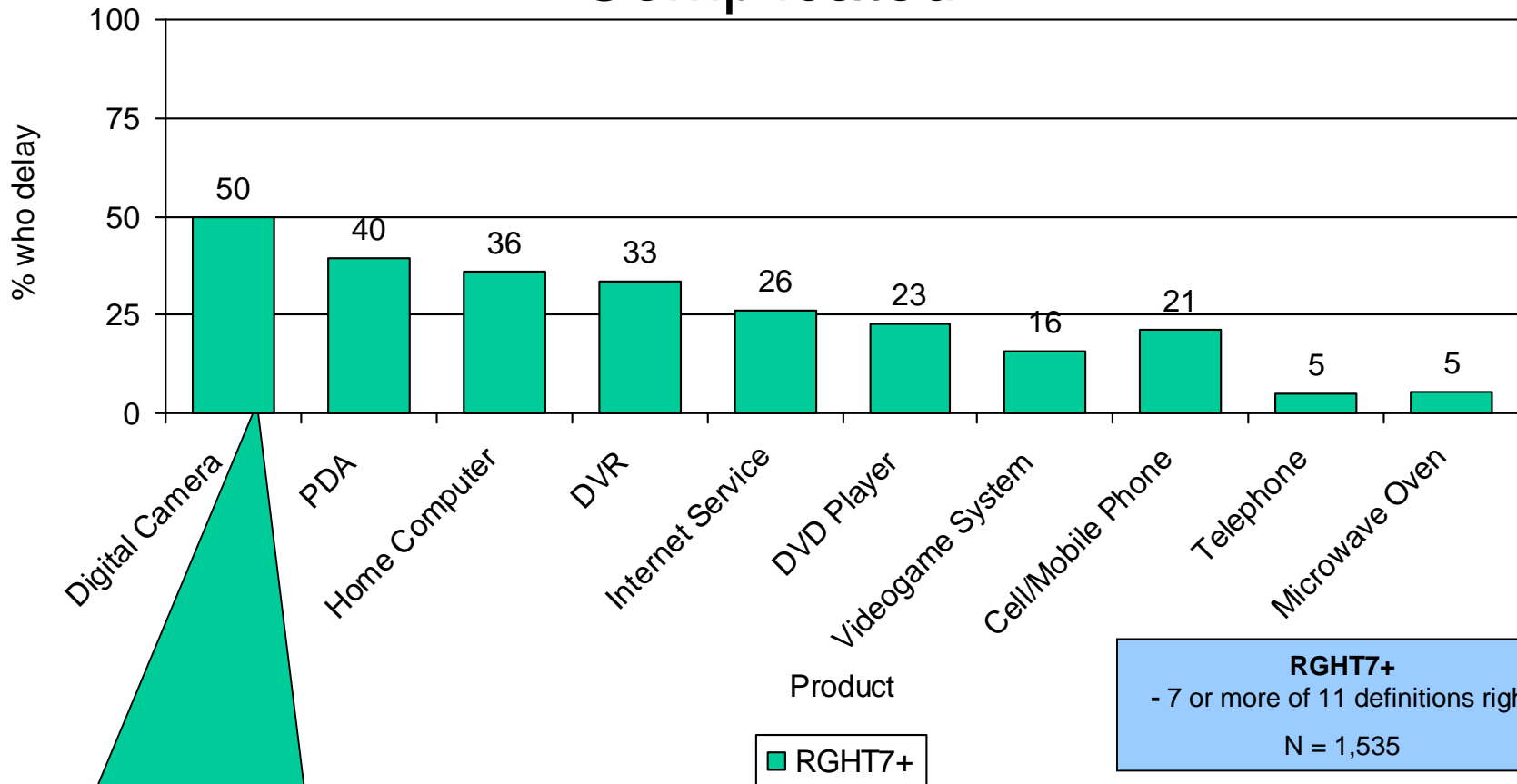
Product

■ RGHT<=6

RGHT<=6
- 6 or less of 11 definitions right
N = 1,535

Worldwide

Even the Most Knowledgeable Delay Their Technology Purchases Because Products are Complicated

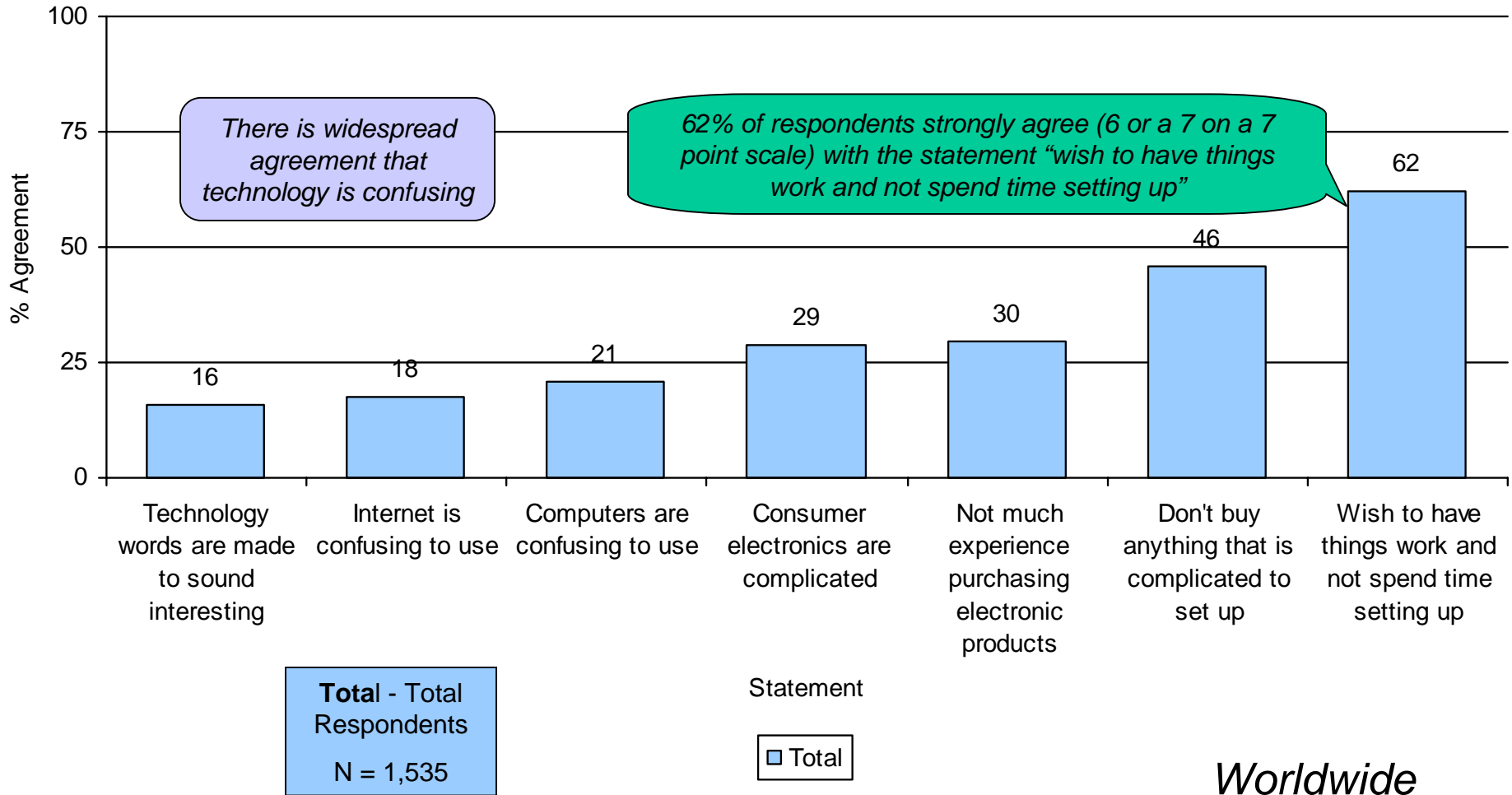


50% of those who are most knowledgeable about technology terms delay purchasing digital cameras because they are too complicated

RGHT7+
- 7 or more of 11 definitions right
N = 1,535

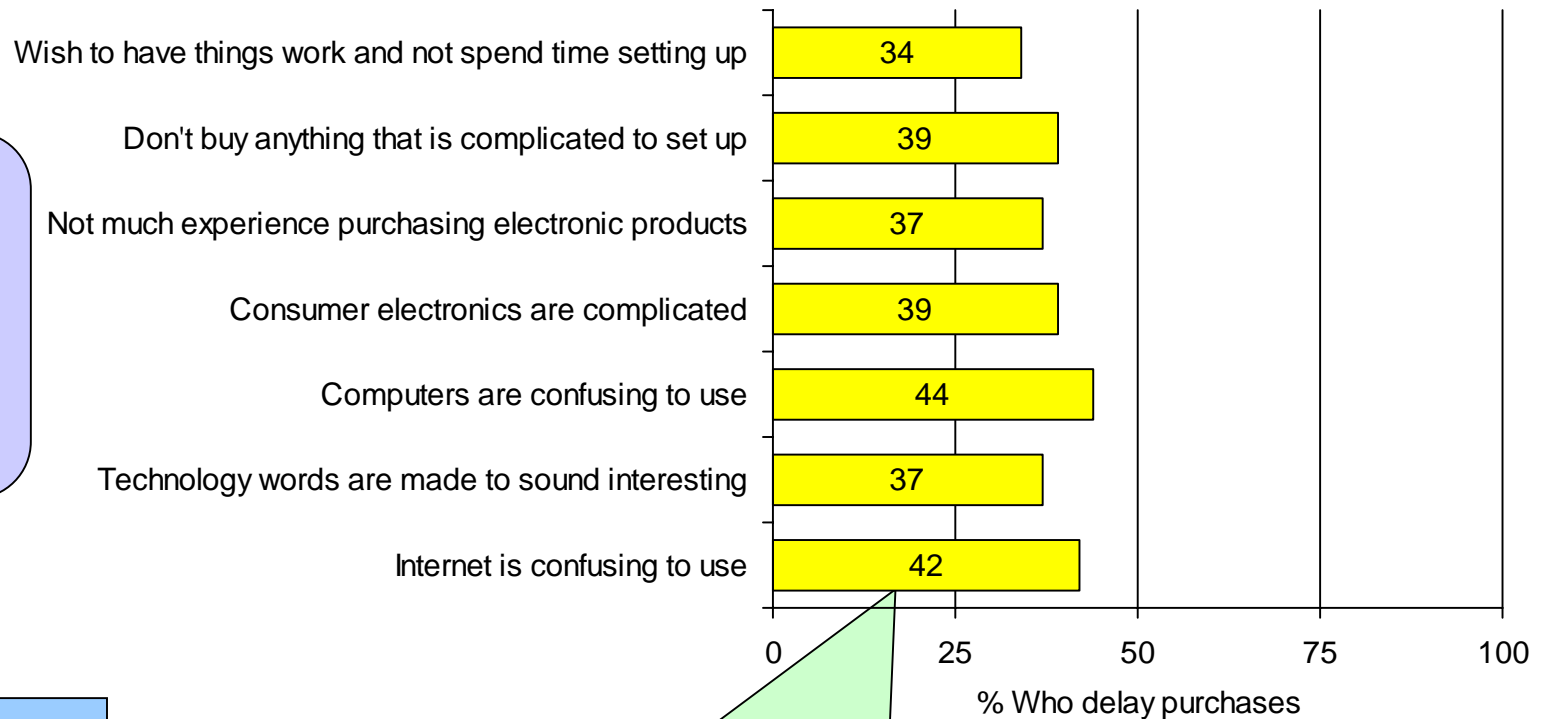
Worldwide

Widespread Confusion Concerning Technology



Those Who are Confused are Also Those Who Delay Purchasing

Many of those who express confusion are also those who delay purchases of complicated products



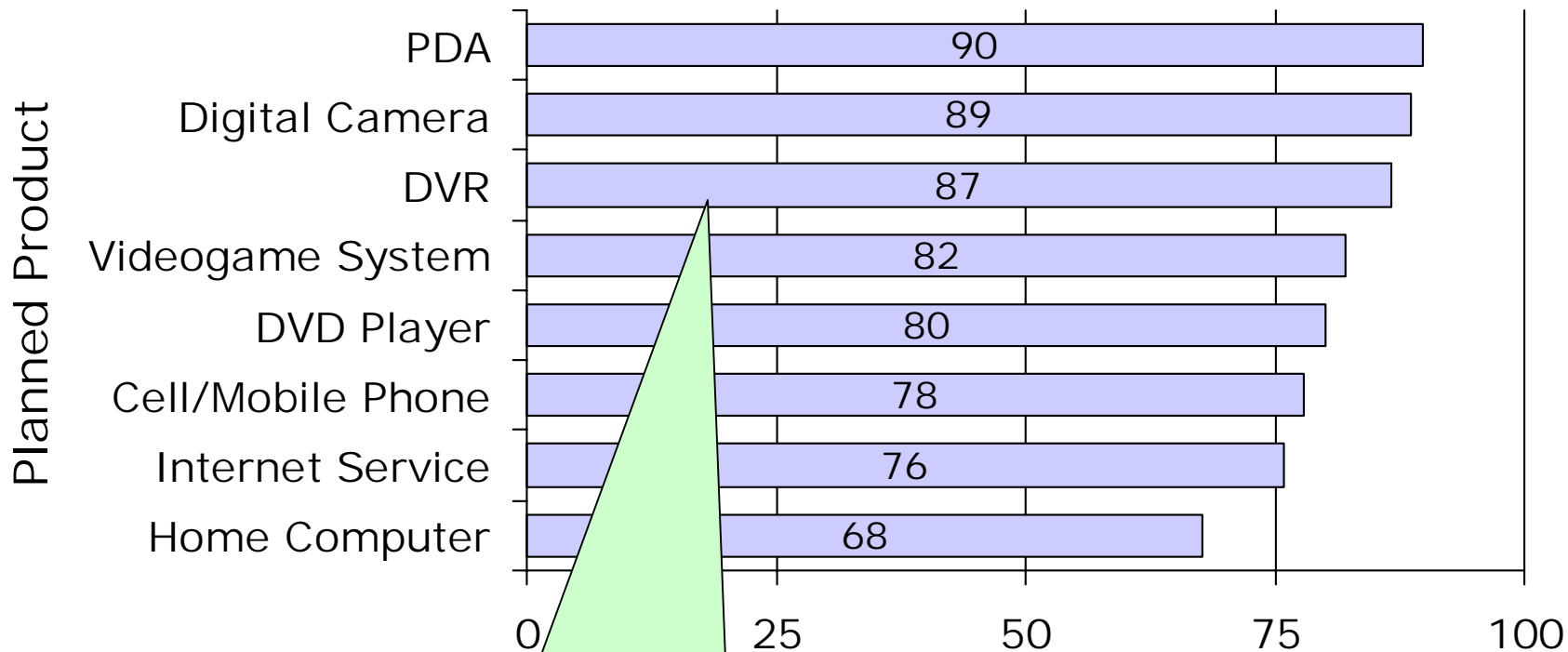
DLY1+
 - Delayed purchasing on 1 or more products because too complicated
 N = 1,535

42% of those that Strongly Agree (6 or 7 on a 7-point scale) that the Internet is confusing to use, delay purchase of technology products that are complicated

■ DLY1+

Worldwide

Is the PC a Gateway? Those with Strong Plans to Buy Other Technology Products Already use a Home PC



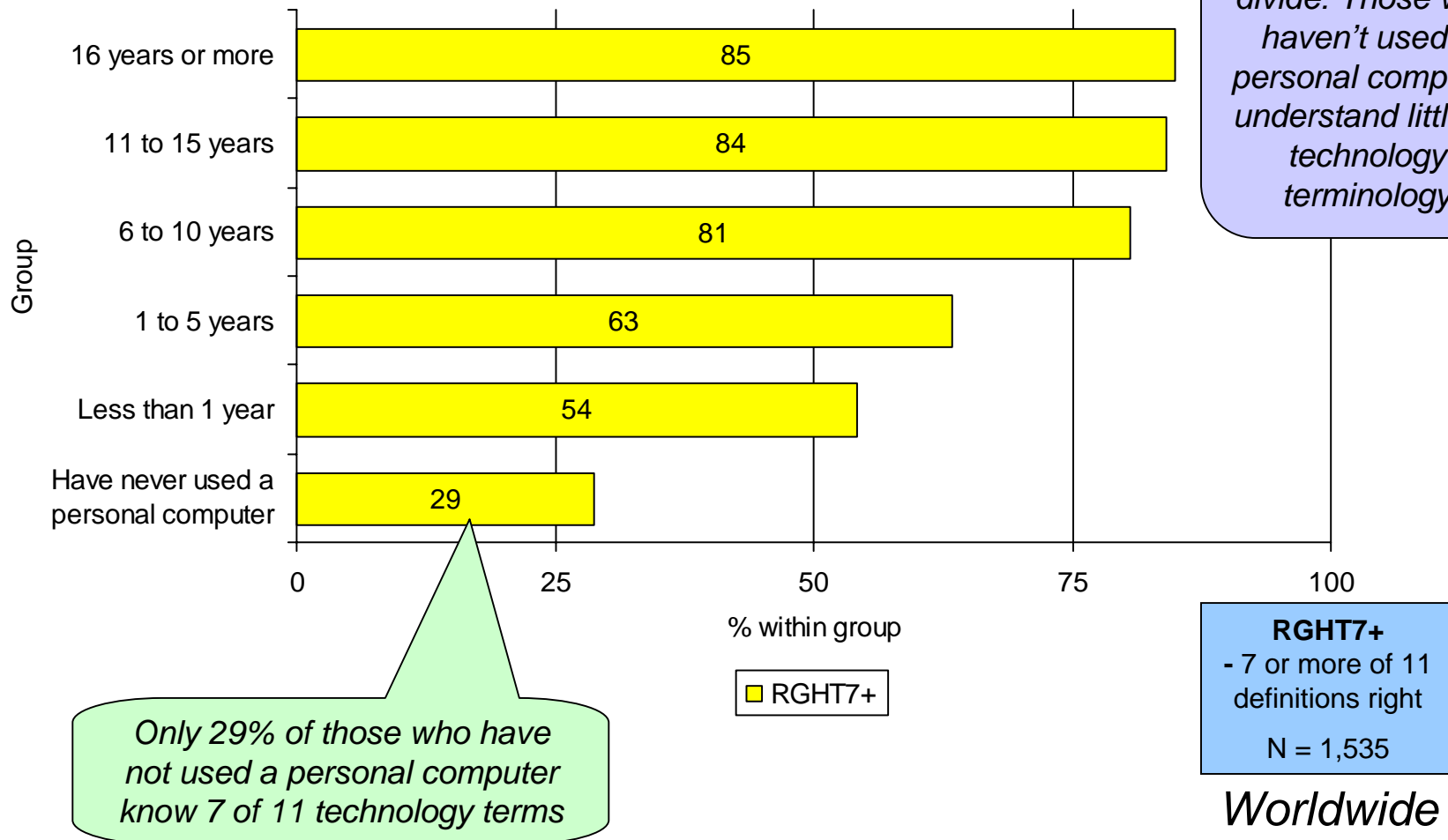
87 percent of those with plans to buy a DVR already use a home computer

% within group

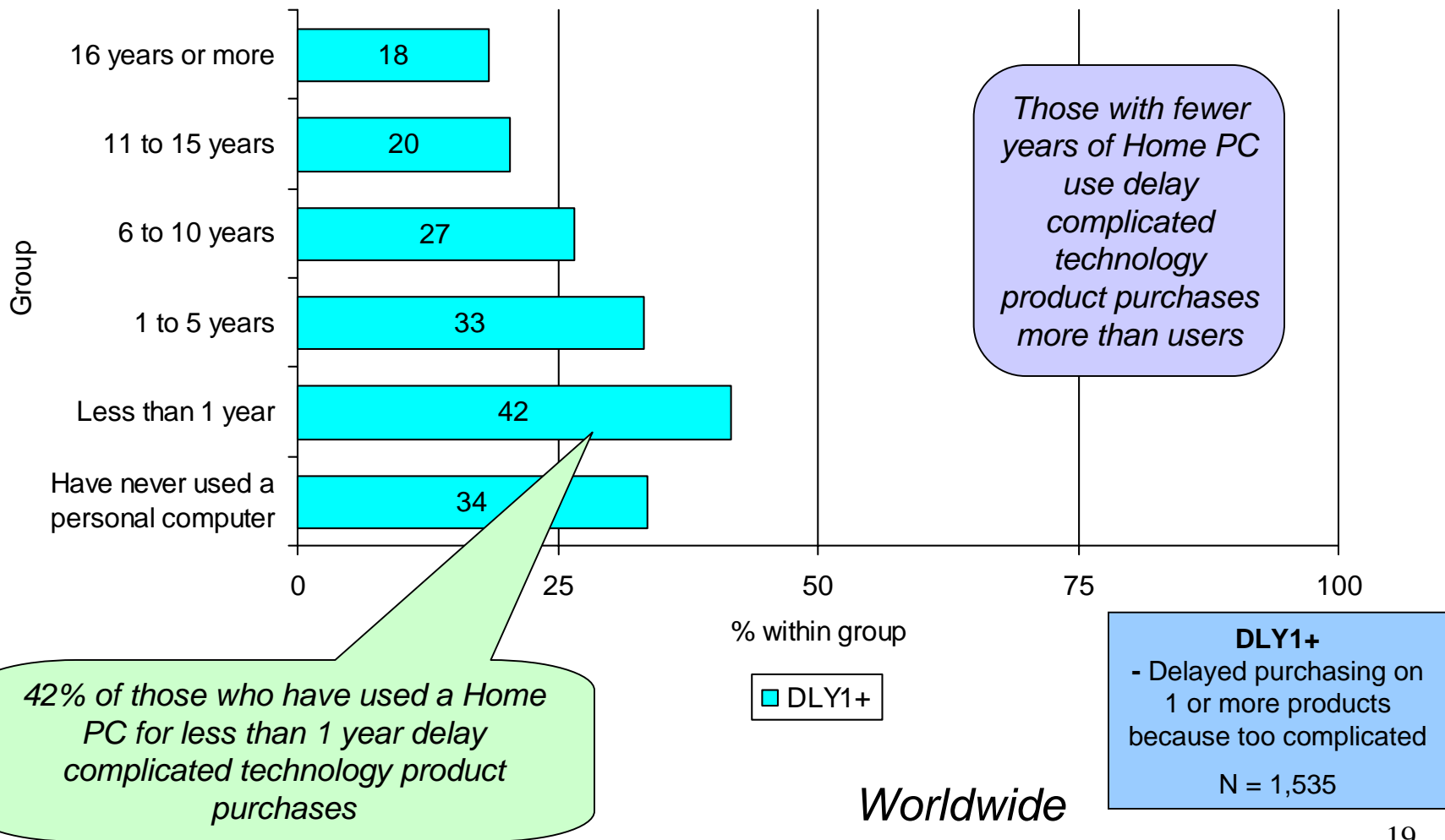
■ HPC=Y

HPC=Y
- Used a Home PC in the last 3 months
N = 1,535

Technology Knowledge Takes Years of Experience to Increase



New Home PC Users Delay Purchases More Than PC Veterans



Technology Affinity Segmentation

- Respondents segmented by Technology Affinity into six unique segments
 - Attitudes about technology
 - Technology knowledge
 - Number of correct answers selected from multiple-choice definitions of widely-publicized and advertised technology terms
 - Number of technology products used
 - Number of technology products planned to be acquired in next 12 months
 - Perception of complexity of technology products
- Cluster analysis
 - Respondents with similar answers are grouped together
 - Segments unique and separate from other segments
 - Using Euclidean distance

Respondent profile – Who are the Technology Affinity segments?

- Segment A – “Flummoxed & Flustered” - 10% of respondents
 - Confused, Unclear, Complicated, Skeptical, Tech-shop-inexperienced, Disconnected, Less-Educated
- Segment B – “Curious & Cautious” - 14% of respondents
 - Confused, Hesitate, Complicated, Tech-curious
- Segment C – “Pragmatic & Prudent” - 19% of respondents
 - Tech-Bright, Unadventurous, Practical, Late Adopters
- Segment D – “Comfortable Competents” - 14% of respondents
 - Comfortable with Technology, More Highly-Educated, PC Veterans
- Segment E – “Mainstreamers” - 27% of respondents
 - 30-something families, Okay with Technology, Average
- Segment F – “Gadget Hunters” - 16% of respondents
 - Undaunted, Knowledgeable, See Tech as Uncomplicated, Tech-Curious, Tech-shop-Experienced, Wire, More-Highly-Educated