What Consumers Want

Breaking Down the Sea-Change in Wireless Home Networking

Contents

Closing the chasm

Many consumers are ready to buy a new home router, either to upgrade an existing installation or to install Wi-Fi in the home for the first time.

But there is a wide gap between what they are trying to achieve with their purchase and how available routers, whether from their internet service providers or through retail, are positioned.

Technology-laden marketing messaging with terms like 802.11ac and tri-band don't resonate.

Some consumers wade through the maze and make a purchase. But many don't, as FeibusTech asserted last fall in a research brief entitled, The Coming Sea-Change in the Home Network.

> *The market for home Wi-Fi routers is smaller than it should be because some consumers get confused by the jargon and end up delaying or even postponing upgrades and first-time router purchases*

Whole-home Wi-Fi systems are the first router products tailored specifically to address the needs of the average consumer, and the rapid growth of the category underscores just how big the void had become – and how much pent-up demand had accumulated as a result.

In the space of 12 months, whole-home Wi-Fi systems grew from basically nothing to 20 percent of all router sales in December 2016, according to NPD.

To help quantify the chasm – and the opportunity – FeibusTech culled insights from an extensive survey of more than 2,000 US consumers conducted by Qualcomm and created this e-book. This e-book will share the key insights from that survey to help OEMs build and market better products, to help carriers identify ways to meet the expectations of their subscribers, and to help retailers improve the buying process for consumers. In this e-book, you will learn:

- What problems consumers have with their existing routers,
- What motivates consumers to buy their first router or upgrade their existing unit, and
- Which features and specs resonate with consumers.

Finally, the e-book will present a statistical analysis designed to help router suppliers identify the combinations of features with the best chance of compelling consumers to buy their hardware.

The answers

Question 1: Do today's routers meet consumers' needs?

The opportunity for networking suppliers with well-positioned home Wi-Fi routers is substantial. Nearly 50 percent – more than 1,000 of those polled –intend to buy a Wi-Fi router within the next year, including 500 who do not now own a home router and 505 who do.

For respondents who own routers, 59 percent report having issues.

The top issue: connectivity stops, slows or is not stable (24 percent of respondents).

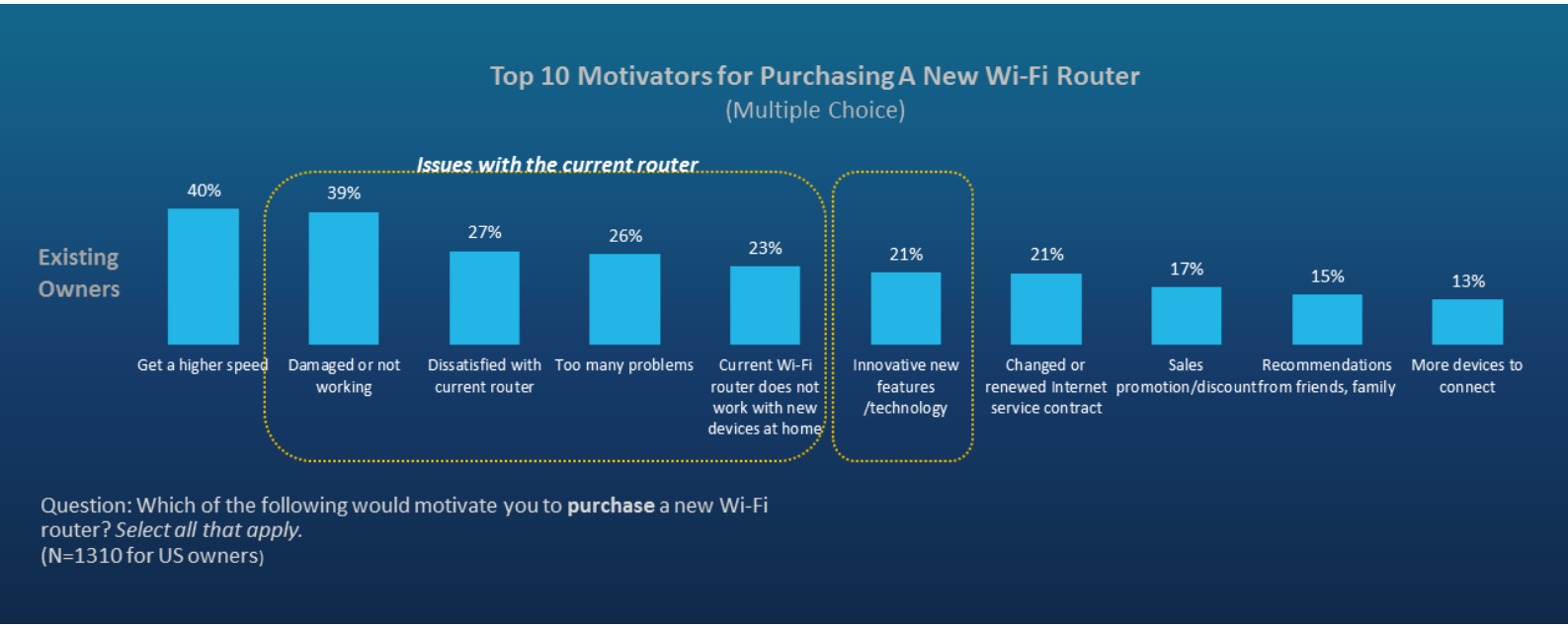
The second biggest issue: streaming issues like buffering, lags and other glitches (23 percent of respondents).

Streaming quality is very important to US consumers. Fifty-four percent of respondents said they subscribe to at least one streaming service, like Netflix, Amazon Prime or Hulu.

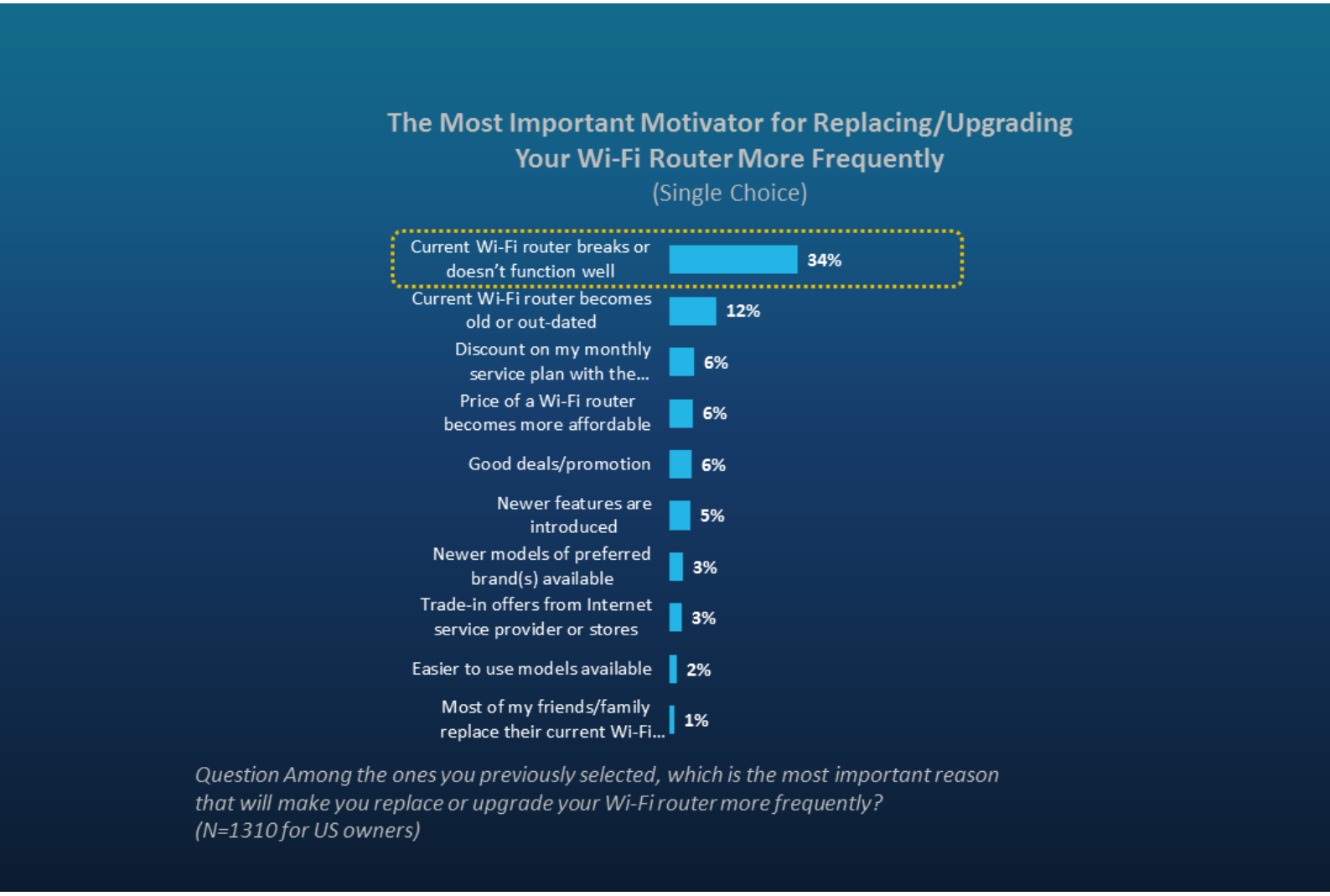
The median monthly expenditure for streaming is $25. So it's hardly a surprise that the top reason they go shopping for a new router is poor performance from the existing router, cited by 44 percent of respondents.

Question 2: Are router manufacturers delivering marketing terminology consumers can understand?

Existing router owners list “get a higher speed” as their number one motivator to upgrade, followed by a handful of issues with their current router, as the chart below illustrates.



Yet when pressed to pick what would most motivate them to upgrade sooner than planned, the overwhelmingly popular answer was not a performance upgrade, but rather when the router breaks or doesn’t function well, as the next chart shows.



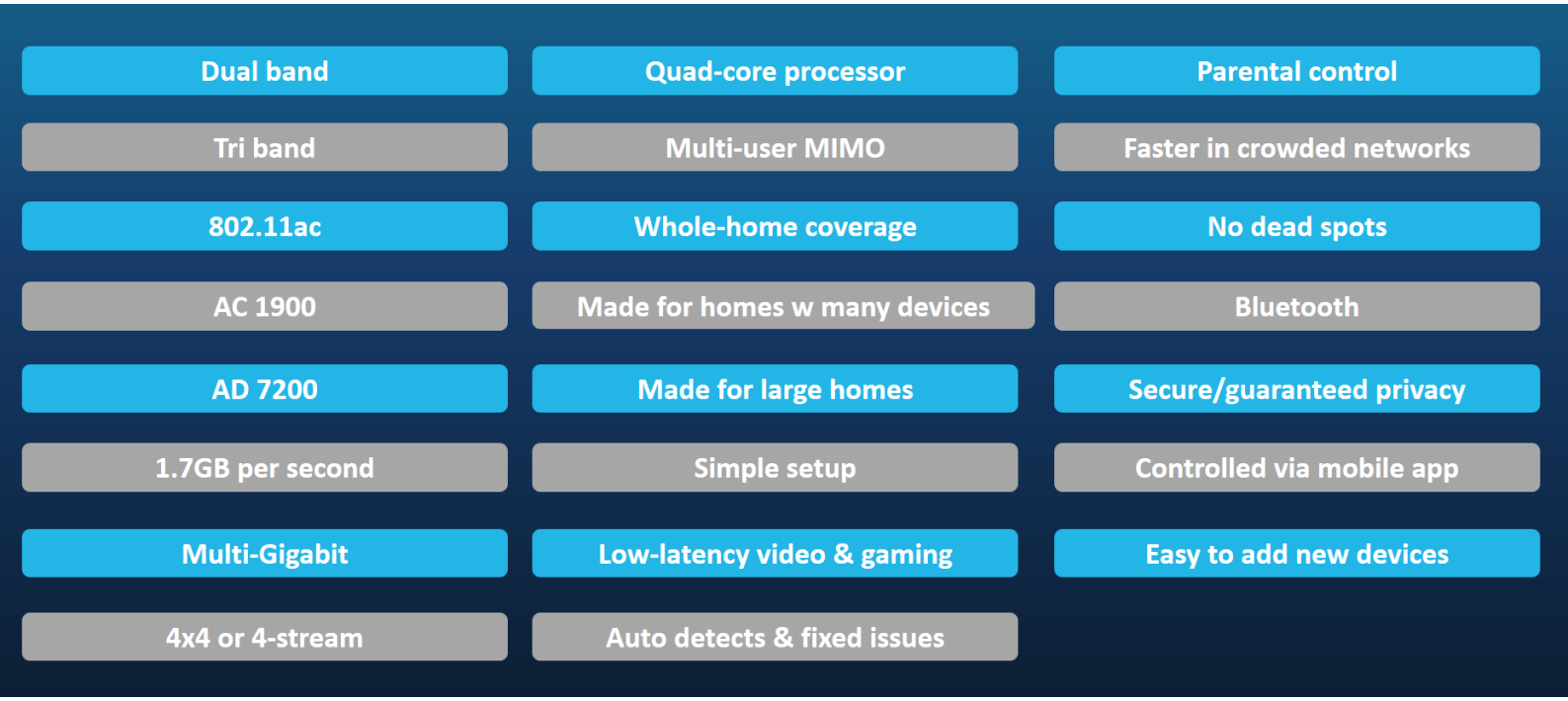
So why the disconnect? The survey suggests that a deeply dissatisfying shopping experience may be what nudges consumers to wait for something bad to happen with their current router than to seek out something good in an upgrade.

To be sure, shopping for a home Wi-Fi router can be a confusing and difficult experience for consumers, in no small part because the terminology used to market the products is foreign to most buyers, and doesn't line up well with the problems they are trying to solve with the purchase.

Nearly two-thirds of owners – 64 percent – report challenges with the buying process. For non-owners who intend to buy, the figure is even higher, at 85 percent. The most common challenge cited by both owners and intenders is that it is difficult to choose which router to buy (24 percent and 26 percent, respectively).

Question 3: Why don't consumers identify with the consumer marketing terminology for routers today?

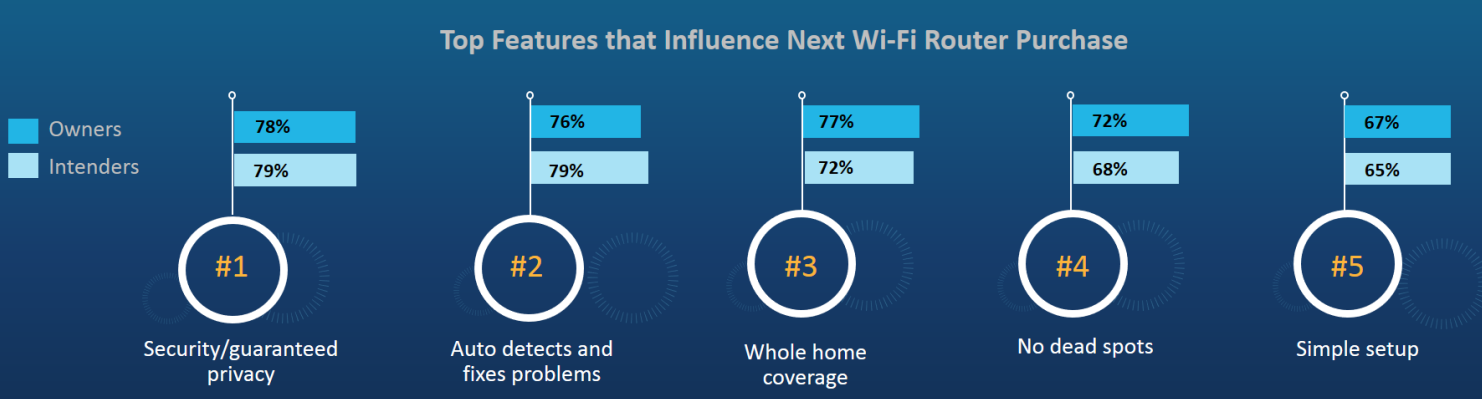
Using *MaxDiff*, a well-established statistical methodology to rank-order feature preferences, 23 Wi-Fi features were tested for how well they resonate with consumers. The features are listed below:



As mentioned, performance tops the list of purchase criteria – but the analysis shows that consumers do not understand the terms used to connote speed or performance. It is common-language features that ring true for influencing the next Wi-Fi purchase, not the technical terms router manufacturers typically use to signal performance.

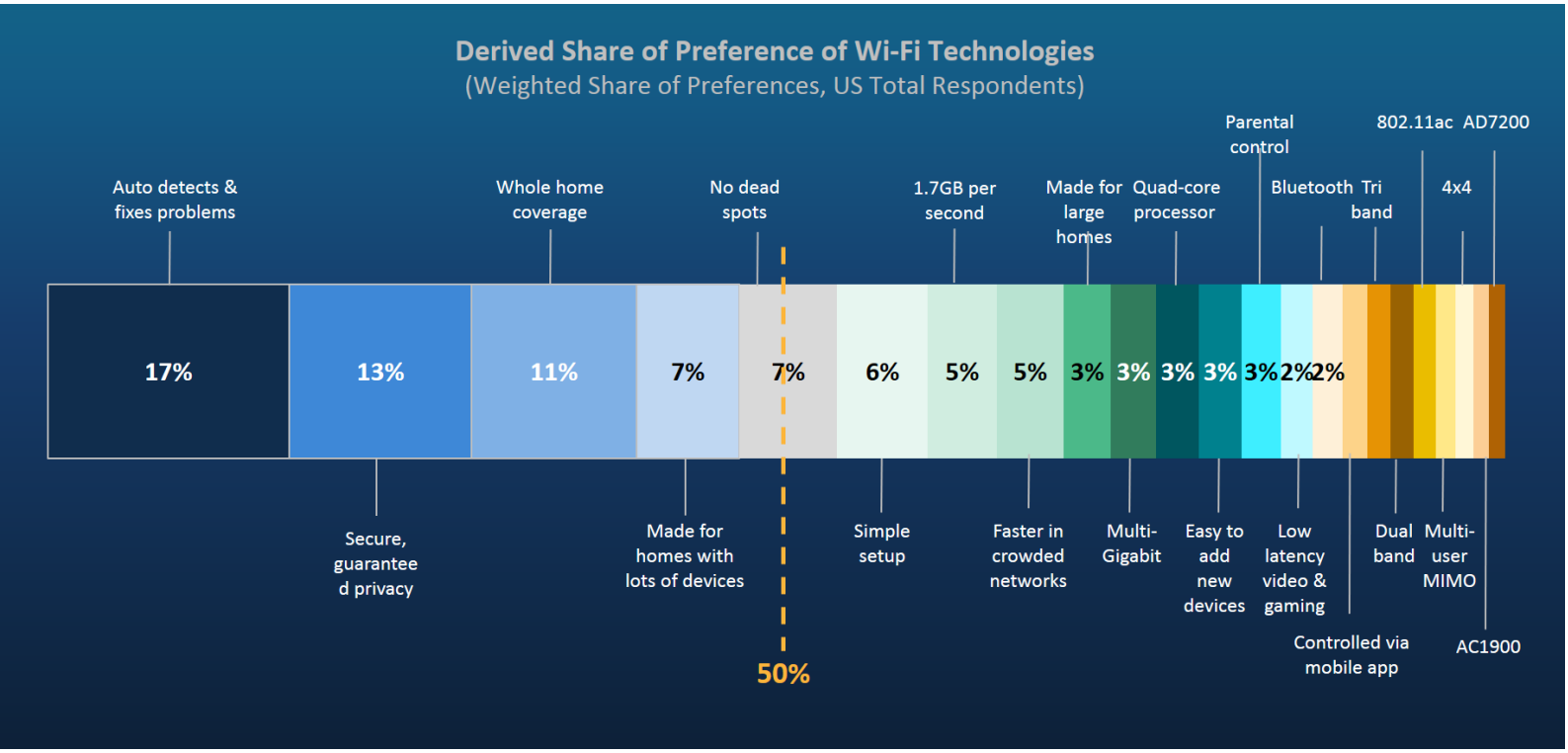
As the graphic below illustrates, the most-appreciated consumer features convey a clear desire for security, manageability and pervasive connectivity.

What this suggests is that this is how consumers define performance. Which means that there is upside for hardware suppliers that align their marketing messaging with consumers' performance criteria.



Question 4: Which home Wi-Fi router features attract consumers?

The following graphic details the derived share of preference, which illustrates just how little the technical terms resonate with consumers. Common-language features are preferred by a wide margin:



Question 5: How can hardware suppliers win in the consumer market?

The best way to attract consumers who are ready to upgrade their router or venture into whole-home Wi-Fi for the first time is to provide a clear marketing message that focuses consumers on simplicity of use and range of performance.

Suppliers will win in this new market by conveying features that resonate strongly with consumers.

Simple, easy-to-understand marketing messages focused on things like self-managed network with complete coverage will draw attention to your router.

Question 6: How best to entice today's consumer?

To help OEMs and Internet service providers develop and market more successful products, we're presenting this *TURF analysis* – Total Unduplicated Reach and Frequency – to identify feature combinations with the best chance of enticing buyers.

Below are combinations of features ranked with the best-weighted probability for success:

Messaging Package	Best-Ranked Message Combinations
Two-feature set:	*Whole-home network coverage* , and *Auto-detects and fixes issues* .
Three-feature set (tie):	*Whole-home coverage* , *Auto-detects and fixes issues* , and *Secure/guaranteed privacy*
	Made for homes with lots of devices , *Auto-detects and fixes issues* , and *Secure/guaranteed privacy*
	Whole-home network coverage , *Auto-detects and fixes issues* , and *1.7Gbps*

A more complete set of results from TURF analysis can be found in the Appendix.

Question 7: How can carriers better serve their broadband subscribers?

Given that nearly half of owners surveyed said they get Wi-Fi from their broadband gateway, this explosive new segment is far too disruptive for carriers to ignore.

In fact, FeibusTech expects that carriers will adopt whole-home Wi-Fi much quicker than they typically incorporate new technologies.

In the interim, carriers would be wise to encourage awareness of existing retail options and provide education and support for attaching whole-home routers to their gateways. For one thing, it will help ease their customers' network congestion – some of which may be incorrectly blamed on them.

As well, the impressive ease of use of whole-home systems has lowered return rates for retail Wi-Fi products.

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> *So it stands to reason that the retail products could lower support calls for the carriers as well.*

Conclusion

Consumers know what they want from home Wi-Fi routers. They want it to manage the network on its own, keep the network secure and ensure every device has a high-speed connection, no matter where they are in the home.

> *Indeed, consumers want their home network to just work.*

They know what they want. And recent sales data suggests that they are willing to pay for that.

That's eyebrow-raising, when you consider that the median price consumers surveyed said they were willing to pay for a new router was $100.

Nearly a third – 29 percent – ***said they don't expect to pay anything***, presumably because their broadband carrier supplies their unit.

Every available whole-home system costs more than the $100 consumers said they expected to pay. In fact, only single-node systems are available for less than $200. And yet, by all accounts, whole-home Wi-Fi is taking the market by storm.

So why the disparity? In a word, timing. The survey was taken in November 2016, which means it offers a rare glimpse into consumer sentiment just weeks before whole-home systems disrupted the retail router market.

As a result, few were aware of the emerging segment and, as a consequence, couldn't conceive of a router enticing enough to warrant higher prices.

The recent sales data suggests that, as consumers become aware of whole-home Wi-Fi, many recognize the value and are willing to pay for it.

If router OEMs, cable network operators and service providers want to entice buyers and intenders, they not only have to deliver the capability they desire. They also have to communicate that in language that consumers understand, and not with a flurry of tech specs that fly right over their heads.

Appendix

Methodology

The online survey was taken from November 14 to December 1, 2016. The illustration below details the selection criteria for choosing participants and how many respondents were current owners and whether they were shopping for a new router.

The following charts present the demographics for the participants:

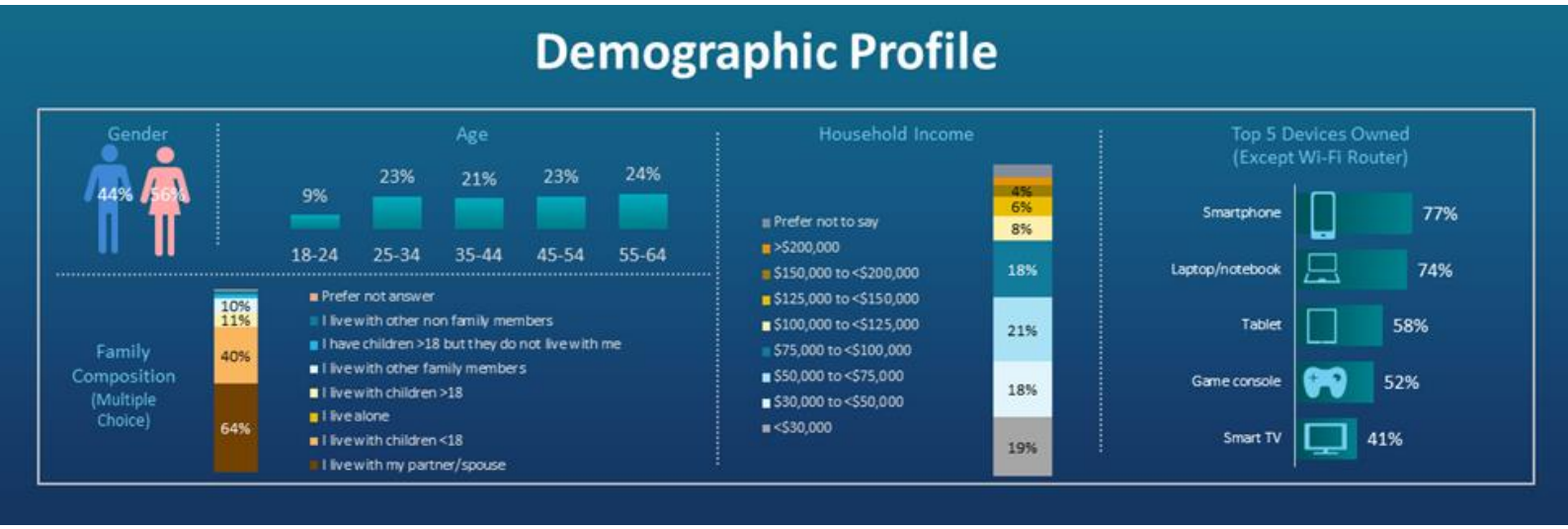
Online Survey

Total Completes		2,015
Current owners -	Active shoppers	505
	Non-active shoppers	504
	Non-decision makers	301
Non owners-	Intenders	500
	Rejecters	205

Screening Criteria

- 18 – 64 years old, representative sample
- No related or sensitive industry
- No participation in recent market research
- **Active shoppers** are current owners, plan to purchase a Wi-Fi router in a year, and also decision makers
- **Non-active shoppers** are current owners, plan to purchase a Wi-Fi router more than a year, and also decision makers
- **Non-decision makers** are current owners but don't participate in purchase decision
- **Intenders** do not own a Wi-Fi router now but plan to purchase one in a year
- **Rejecters** do not own a Wi-Fi router and do not plan to purchase one

1. The survey was about 30 minutes long with 12% response rate in US and 26% in China
2. The data are a representative mix of gender, age, and region based on the census of each country, and weighted by the market composition of 5 price tiers in each country
3. Online survey results are usually higher than other methodologies. Please compare the results with caution
4. The currency exchange rate is based on $1 = 6.9 RMB


Demographic Profile
Gender
44%
56%
Age
9%
23%
21%
23%
24%
18-24
25-34
35-44
45-54
55-64
Household Income
Prefer not to say
>$200,000
$150,000 to <$200,000
$125,000 to <$150,000
$100,000 to <$125,000
$75,000 to <$100,000
$50,000 to <$75,000
$30,000 to <$50,000
<$30,000
4%
6%
8%
18%
21%
18%
19%
Top 5 Devices Owned
(Except Wi-Fi Router)
Smartphone
77%
Laptop/notebook
74%
Tablet
58%
Game console
52%
Smart TV
41%
Family Composition (Multiple Choice)
10%
11%
40%
64%
Prefer not answer
I live with other non family members
I have children >18 but they do not live with me
I live with other family members
I live with children >18
I live alone
I live with children <18
I live with my partner/spouse

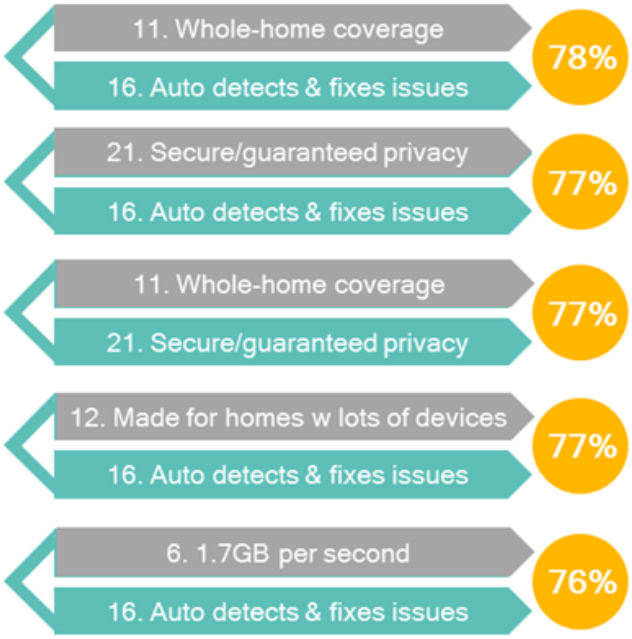
TURF results

Total unduplicated reach and frequency, or TURF, is an optimization approach for finding a subset of features that maximize “reach, ” or the most respondents possible.

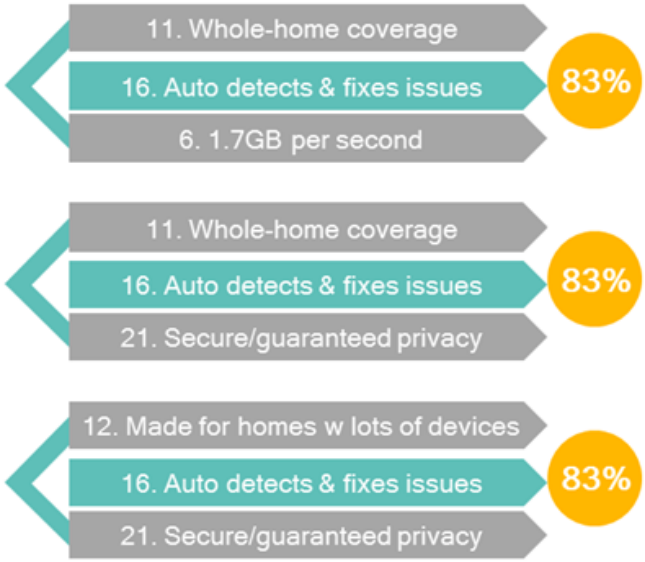
Survey respondents are asked to identify the least and most compelling features from a subset of features. Different respondents are asked about different combinations of features.

Optimizations are detailed on the following pages. The optimizations are based on the Probability of Choice rule: That is, reach is equal to the sum of the probabilities across a subset of features and the probability that the feature would be selected from the entire list of features.

2-Item Optimized Set (selected)



3-Item Optimized Set (selected)



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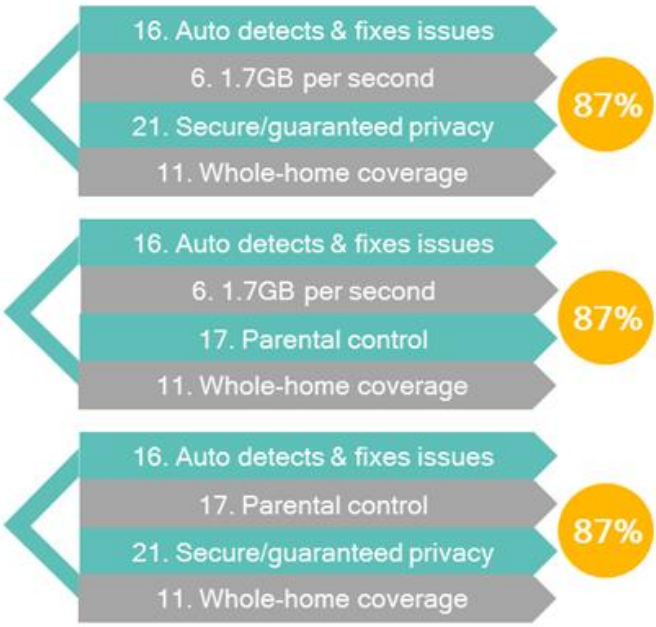
4-Item Optimized Set (selected)



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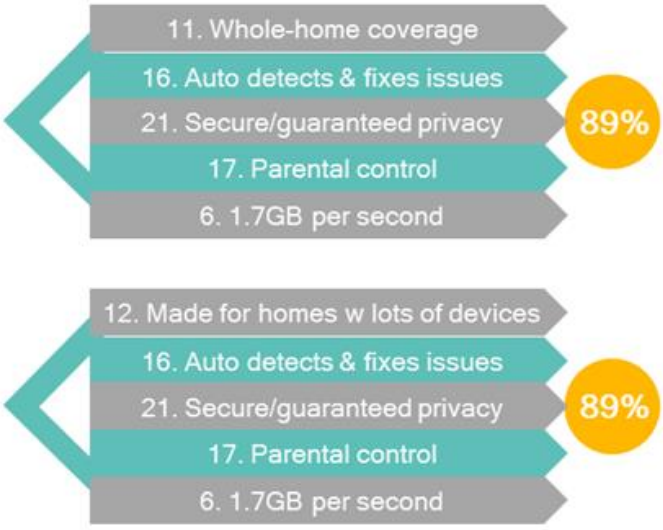

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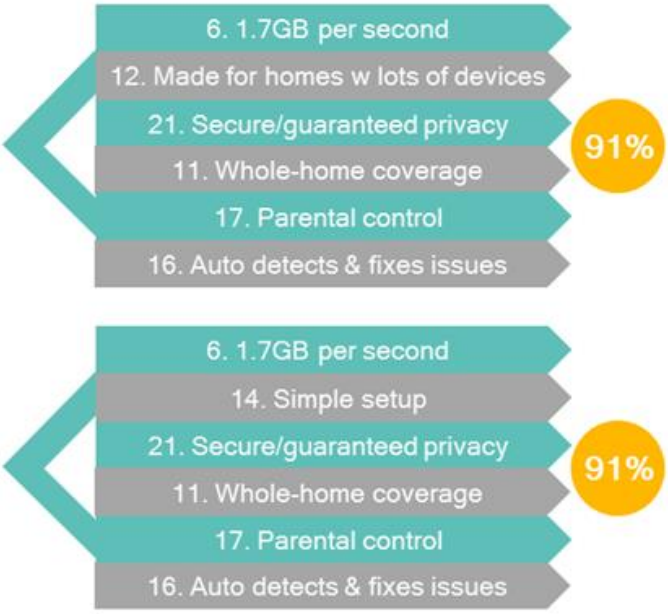
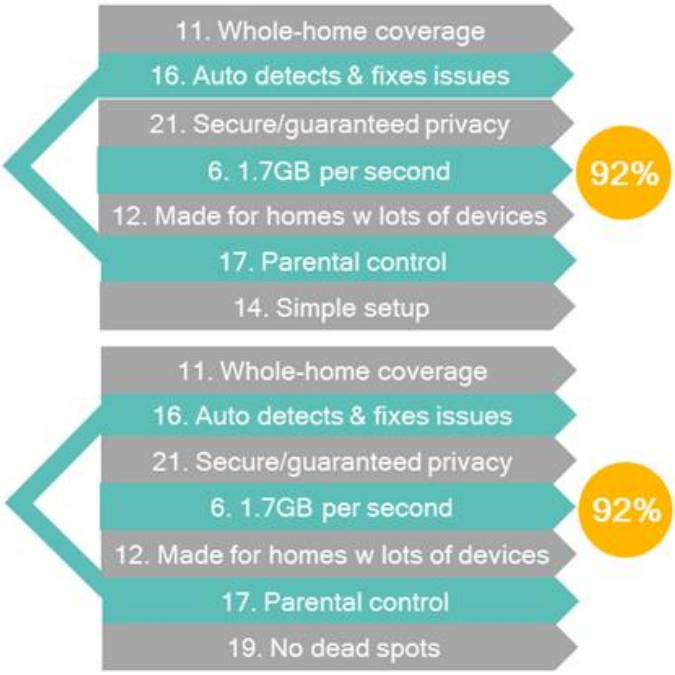
6-Item Optimized Set (selected)



7-Item Optimized Set (selected)



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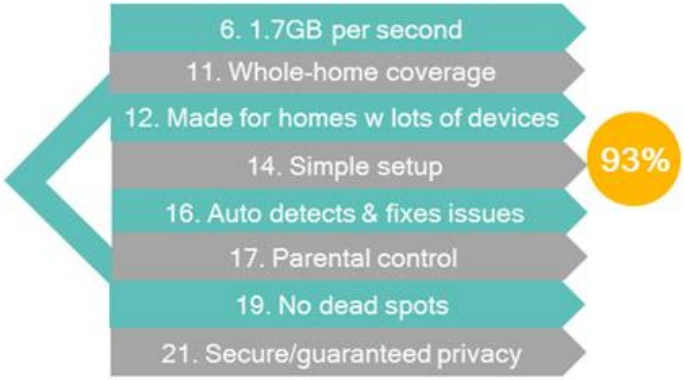
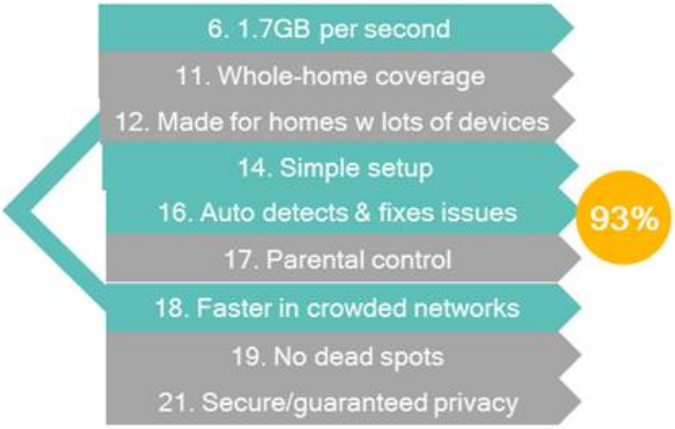
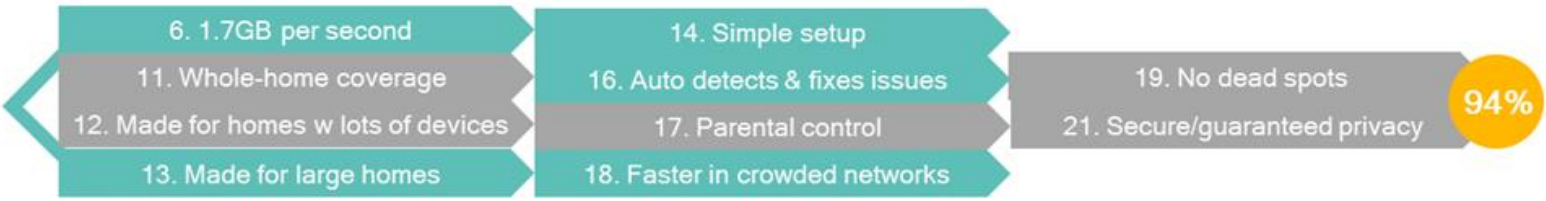
8-Item Optimized Set (selected)



9-Item Optimized Set (selected)



10-Item Optimized Set (selected)



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About the author

Industry influencer Mike Feibus (pronounced FY-bus) is the voice of FeibusTech.

He is a well-recognized and oft-quoted expert on connected health and fitness, smart home, connected car, augmented reality/virtual reality, privacy and security.

Feibus is also a regular technology columnist for USA TODAY and Fortune.

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