

0:00**INTRODUCTION. Name. What you do for work, fun, favorite piece of technology – excluding phone.**

- Nick. Compliance consultant for construction company. Favorite piece of technology is watch. It keeps my phone in my pocket. Fun: Photography.
- Ashley. Work at Weight Watchers. Favorite tech: Standard mini. Fun: winter -- snowboard.

What do you do on your Standard Mini?

- Absolutely everything. I take notes, text friends from it on wi-fi, editing photos, Facebook, social media.
- Damian. Photographer. Fun: backpack, play video games. Favorite tech: my watch. I don't have to use my phone as much. I can be at a meeting with a client and not disrupt the meeting when I get a call or text. I can just look at my wrist and say this isn't important; I can pay attention to what's going on.
- Natalie. Work at a graphic design firm. My favorite tech: Fisher-Rice Tablet – since I can't say phone. Fun: travel and knit.

What do you do with your tablet?**0:05**

- I use it as my music player. I also have wireless headphones. Have it in my bag, use it all the time. Play music, read books, magazines, etc.
- Joaquin. Artist/sculptor. Fun: Check galleries, art studios. Favorite tech: new PS4. I love playing.

How do you use the PS4?

- Gaming. Connect with my friends in Europe. Play together. Watch movies, listen to music.
- Bevin. Work in finance as a developer. Favorite tech: my daughter has **[INAUDIBLE]**. It's not advanced at all. My wife is 8 months pregnant... so my phone may go off.

Can someone tell me the homework assignment?

- Take a picture of any sort of data storage we have in our homes.

Can we list them?

- External hard drive.

Brand?

- Western Digital.
- Toshiba.
- G drive. It's a brand of external hard drive.

- CD drive.
- SD cards.
- Mini and micro SD cards.

Are micro and mini the same?

- No, two different ones.

Brands associated with this?

- SanDisk.
- Kingston.
- Olympus – in one of my cameras.
- Dropbox, Google Drive, Box – all cloud based.
- Thumb drive. Also Kingston.

These I just assume are their own brands?

- Yes.
- I had a Lexar SV card as well.
- I took a picture of my Roku – holds movies.
- A picture of my tablet and I have an SD card in there. Fisher-Rice.
- I took a photo of my Standard and Standard mini.

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- Computer.

Brand?

- Jacobs.
- Wireless router hard drive.

Explain that to me.

- I use it for backing up all my stuff. It's an external hard drive but it also does the wireless in my house. It's an Jacobs device.
- USB drives. USB sticks.
- Same as thumb drives.
- Can store on game consoles. Playstation.
- I have an XBox.

Think of this as the world of storage, let's group these. What goes with what and why? What are some natural pairs?

- All the SD and thumb drive – it's all flash storage.

Everyone agree?

- Yes.

We have the SD cards – mini/micro and thumb drive/USB drives. What would we name this group?

- Small storage.
- Flash storage.
- When I think of those, I think little, small. Portable.

Anything else go here?

- External hard drives – you need to plug it into something.
- Yes, but external hard drives are...
- Unless it's an SSD it's going to be a spin-based hard drives.

Is there anything else that goes with external hard drives? Category in and of itself?

- External and internal hard drives go together.
- You can put computer or game console within that category.
- They have internal hard drives.
- If you were considering that, tablets would go under flash category.

Tablet in the middle?

- I put those cards into a tablet.

Maybe they bridge. What would we name this group?

- Large format storage.

What about Dropbox?

- All of those are cloud-based storage. Google, Dropbox, Box... any of those.
- iCloud.
- That's another one.

Those all go together?

- Yes.

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What did we name that?

- Cloud based storage.
- Virtual storage.
- Remote storage.
- That's another good word.
- Maybe put the wireless router/hard drive in between... it's basically a local-based cloud service.

What about Roku?

- I would put that with...

- It's like Jacobs TV or a blue ray player. You can buy seasons, etc. You have to access it through a TV. You have to watch it on something. Between the large storage and cloud base.
- Do you need a direct connection?
- I think so.
- Then it's cloud based.

Tablets we put in the middle. Would you say the world of memory can be distilled into these big categories?

- Yes.

What are the pros and cons of each of these? Starting with flash/small.

- Cheap.

What's cheap by the way?

- Under \$30.
- Portable.
- I disagree that it's cheap. It's cheap if you only want a little bit of space. It's really expensive if you want a lot of space.
- It depends on the brand.
- Small barrier to entry on any given one. It's never a big investment, any time I go into it.
- Under 64 GB it's cheap.
- I bought off eBay, a 64 GB for my Blackberry. It was \$10. I knew there was something wrong with it, for that price. It lasted 2 weeks. I lost all the contents.

It can be cheap.

- I would say under 32.

Tell me about the size thing you're talking about. What does that have to do with flash?

- The higher, the more amount of storage available on the card for you to put into another device.

Is this a pro or a con?

- Depends on what you're using it for. If you're switching, handing files off to somebody, that's fine. But if you're going on a trip, and you need to take hundreds of pictures, you will need multiple cards or get a bigger one at a bigger price.
- When I think of a card, I think of using it for personal use as opposed to putting something on a thumb drive which is what I'd use more for work purposes. It's easier to access. A thumb drive, you plug it in there

whereas these cards you have to put them in your phone; can't get them out as easily, once they're in. You just use them for storage.

For you the card is more personal, the thumb drive would be for sharing?

- Yes.
- I'm a photographer so it's different. If I'm doing a shoot with other people, I'm handing off cards constantly. We're switching and trading off. Sometimes a client will specifically ask for a card.
- **[INAUDIBLE]** it's all cloud based, pretty much. Every picture of my daughter is online within 30 seconds.

What are the cons if this flash world?

- You can lose it.

Is that a real concern?

- Yes.
- And corruption. He bought a \$10 64 GB card and it's corrupted in 2 weeks.

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- I like to take pictures of my artwork all the time. I don't like to erase them. I keep saving those. It sucks when I lose them.
- If it's not enough space – if it's on a camera, you have to constantly keep replacing them.

Is this space generally smaller?

- Yes.

Smaller in size, and smaller in space.

- The biggest thing about SD and micro SD is devices use them rather than the other things, devices don't really use.

Explain that.

- Your phone takes a micro SD, Camera takes a micro SD. General devices you use, you want to expand memory, you normally use a micro SD.

Is that a good or bad thing?

- It's great to expand memory.

They're allowing your devices to be bigger?

- Without it on my tablet, I wouldn't be able to put anything on it. There's only certain things that are allowed on the card. Otherwise it takes up the memory that's on the actual tablet.

Natalie was saying there's a difference just between the thumb drives and the SD cards. Do you agree?

- I haven't used a USB drive in 5 years.
- I use USB drives at work or school. If I need to hand files over to somebody, I take it out of my computer and put it in theirs. If I'm working on a project at school...

Damian said he's giving the cards to other people.

- If it's a lot of files, something that can't be emailed... then I'll put it all on a USB drive and give it to somebody.

How many within the small flash world, do you guys own?

- A lot.
- I have one that's a nail polish bottle, it's from a media company called Gloss Media.
- You buy a camera, you get a 4 GB card that goes into a drawer, you never use it.

Break them up. How many cards do you own?

- Five. One on phone, one in tablet, 2 for camcorder... actually 6.
- 6.
- I don't use my physical camera any more; use iPhone. I probably own them but don't use them.
- Twenty, maybe more. All my cameras need them.
- Forty.

All for what?

- Different sizes. My wife is a photographer, she has different kinds. Even 250 MB... the old ones. I know I have a box full of them.
- I have two. One in my computer. One in my camera. Very efficient. They're small but have a lot of storage capacity. Expensive.

Now large format storage. Pros/cons.

- You get a lot of storage in something that's easy to switch out. I use mine when I need to move files over from an old computer. I've been doing that almost since college. An old computer that I know is going to die soon, those files go in there. Music files.

Sounds like you're sweeping everything into there.

- It's literally storage. If you pictured an actual storage space, that would be totally basement.

Is that a pro?

- Yes, it's great. I have this one thing. I know it's reliable. I can always plug it in and get what I need out of it.

- I do the exact same thing. I put everything from old college computer onto an external hard drive. It starts and you can just drag them onto your desktop. Takes time to copy over, but it's easy.

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Did you leave it on the external hard drive?

- It's the same thing if you were moving from one apartment to another, you need to put it into storage, it's there for the move. I wipe it out otherwise.
- I keep all my stuff on it because it has so much space. It's 250 GB which is computer storage. I throw what I need on there and leave it.

Similar thoughts?

- I have a media sender at home, I just get more and more drives as I need them. I don't delete things. My wife will put shows on there. I won't think about it for 5 years.

Basement mentality putting it all there.

- My wife will watch stuff. My daughter.
- From my own experience it's convenient for me to buy 1000 GB or two 500GB. If you lose or break it, you lose everything on it. If something happens to a particular thing, you can get a new one. But if you have everything in one single place, you can lose everything you have. I deal with a lot of pictures for work... I like to have one for family, one for work.

You just keep on filling them, getting new ones.

- Right. I'm afraid to lose them. It happened before to my wife, one broke.

Do you keep the same stuff on more than one?

- My wife went to a shoot and lost the whole day's shoot. There's no way to re-record that. Sometimes we need to record on two separate drives.

A backup of the other.

- My archive drives, I have everything rated. It's one drive with 2 drives inside of it. Constantly making two copies. If I add one file, it adds to the other drive. If one fails there's the backup. But if you lose it, you lose it.

You have backups of these external drives.

- Backups of backups.

These sound great. Any cons?

- Speed. They're slow.
- Power. You have to plug it into a power source.

Is that annoying?

- Depends on the situation but can be a drawback.

Cloud based/virtual/remote – pros and cons.

- It's everywhere. It's on my iPhone, Standard, computer. If I need to access it from work, I can log in through it. If you're close to somebody, you can do airdrop. You break it up into albums. That's what I use constantly.

Accessibility is big for you.

- That's the iCloud. The other things are I use it for school. If I'm taking it off my Standard, I can send it to my Google drive, it will automatically go to Gmail, so I can print it out on a computer or send it to my group.

Sharability capability.

- It's also a backup. If I'm taking notes on my Standard, and it dies, it saves it my Google drive because I'm using Google docs.

Accessible, sharable, backup. Nice.

- I agree with the accessibility. The ability to get it from anywhere, even if you're not on your own computer. You say oh, let me go on Google Drive and I can pull up my stuff to send to someone. That's definitely a pro.
- I was going to say you get "X" amount of space, and if you run out of that space, they make you pay for it. I feel like the majority of people probably don't get through all that space. But you guys who have a lot more, then have to pay. Especially with companies like Dropbox.
- It's \$10/month for 1000 GB.

There's a cost component.

- Amazon is just introducing free hosting for videos and photos. Now you don't have to worry about that. It's unlimited. If you have Amazon Prime, you have unlimited storage.

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- I feel like Amazon did that before, too but they took it away. It was definitely on their amazon site.

We could almost throw Amazon in that group?

- It's just recent. Super recent.
- It gives you this other option; it's outside of your house. Say your house burns down, you get robbed, you have a backup option. I can't spill water on it.
- It's not just photos. It's your contacts, your emails, depends on what you backup to it, or just have it linked to. When you get a new phone... you don't have to type everything in. It's seamless.

Let's talk about that. What do you save? You said photos, shows. Do you save photos in all of these worlds, just one of these worlds?

- Probably all of them.

True for all of you?

- Yes.

What else do you save?

- Video. In all of them.
- Music files get saved. The SD cards go in my phone, music is saved on my phone...
- Or you have Spotify, it's streaming constantly, that's technically cloud based.
- Pandora.

Anything else you're saving?

- Work files. Stuff that's too big to email, a lot of times you post it on Google Drive, Dropbox so someone could access it quickly. That's a cloud based world.
- I have four thumb drives for software. If I have a friend's computer who needs Photoshop, I can take out my thumb drive, put it in, and install it right there.

Software storage. Anything else?

- Is there anything else?
- Presentations, excel sheets.
- Powerpoint...

Is there anything you wouldn't save on any of these?

- I have a file under Notes on my iPhone that's coded to me... passwords. I have so many passwords for so many things. Technically it's on there, if it's on my phone. I wouldn't share it with someone.

Which world does your password document live in?

- Unfortunately iCloud.

Why is that unfortunate?

- It is and isn't. If somebody steals my iPhone they can't get into it. But if they somehow could, then that's bad. But if I lose my phone and somebody doesn't get into it, I can just get another phone and that information will be uploaded.

What's the drawback to having your passwords in the cloud?

- It's "hackable."

Is that specific to the cloud world?

- It's easier. If somebody takes your laptop they can hack into it. But it's a lot easier to just do it remotely.
- Look what happened to all the actors in Hollywood.
- They all had their naked photos on the iCloud.

**Maybe naked photos are something we would never store in the cloud.
What else would you not store?**

- I don't store larger files. Large videos – if I'm doing a video shoot that I'm not going to store the entire catalog, it will take up so much bandwidth just to upload all those files. Online storage in general is not cheap.

You wouldn't store really large files in the cloud?

- No.

Where would you store it?

- The large storage format. Local media.
- I wouldn't store something that big any more.

What don't we save? You said you save everything.

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- Well, not everything. Stuff that I care for. If go to a gallery, see something I like... I like to take a picture of new stuff that's going on. I come home, watch it... I might save 5 out of 20 pictures.

You save the photos you like, delete the ones you don't. Those aren't saved anywhere.

- I don't delete anything. I've had a Gmail account for 15 years now. They keep giving more space away. I went from a 128 MB USB drive to a 2T external hard drive in 10 years.

You're keeping everything.

- I don't need to delete anything.

Why? What's the fear in delete?

- No fear, just no need to delete.
- It's taking the time to sort through the stuff, there's no benefit to that.
- I don't even think about the extra time. If you never had to do laundry so your clothes smelled nice, if you never smelled, you'd never even think about doing laundry. I don't even think about it.
- I disagree with that. I'm super **[INAUDIBLE]** with my digital files. They're so hard to organize and find certain content. They're searchable, but if your hard drive is fun, unless I chronologically order all this content, I don't know where anything is and I just get lost.

For you, the time for sorting through is a lot?

- Yes. For instance, the first show or movie – I'll watch it, consume it, and delete it. If I bought it from iTunes, I can re-download it again. If I stole it illegally, I can re-download it again.

Fill in the blank: I delete things that...

- I've already consumed.

- Not important to me. Junk emails.
- No need.
- What I'm not going to use again.
- That are cluttering. Aren't the best of the best version. Whatever it is. If I have 18 photos of the same thing...

What devices do we store off of? We talked about tablets, cameras, phones... anything we haven't touched on of what you're using this whole world with?

- Computers.

Are you using all of these with computers?

- Yes.

I'm wondering if certain devices belong in certain worlds.

- I think the computer goes with any/all of those.
- Even an SD card. There's a slot in my computer.
- It's something you leave at home. I have a laptop at home. I started grad school and I said I can't carry this to work and then to school, so I got an Standard. But I send my notes to my laptop. If I want to write a paper, go home and do that. Or I download my pictures to my computer. The ones I care about. That's home-based.

Are there any devices that don't fit in all of them? I would never use my phone for large format storage... nothing goes between those two? Or I would never put anything from my phone onto large format storage.

- A video?

Everything on my phone goes into the cloud, they don't belong anywhere else.

- That's not true.
- Photos or email, but not all of those.

In terms of security, we talked about the cloud being really good. But then we heard it's hackable. In terms of security, which is the most secure?

- The external hard drive.

Why is that?

- You're less likely to have it somewhere... unless you leave it in a coffee shop and it's not password protected, someone could take it.

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- It's likely that it's something that you... like you said, it's a basement. You use it, move files on it, you leave it until you need something from it. It's less likely to get compromised.
- No web access.

The ability to disconnect is a piece of that security?

- You can put it physically into a safe. It's a safe into the safe.
- You're very aware of it as opposed to if you're missing an SD card or USB drive.

Tell me more about that.

- I might have 1-2 external hard drives as opposed to 10-12-15 cards, they might not be marked as 1-2-3-4-5. My external hard drive is missing – that's a problem.

Less losable.

- It's more expensive and bigger.

What does that do for you?

- Its easy to lose a little card. If I have it in a drawer with my computer stuff, then unless somebody comes in and takes that specific thing, then I wouldn't take it to a coffee shop.

What's the next most secure?

- Maybe an SD card... the only thing that I would say not to that is that once the files are in your phone/tablet or somewhere accessible from the web, then someone could possibly get the information that's on there. Don't know if that's true, but if I were a hacker, could I pull that off? Out of all of them, that would be the second one.

Agree?

- Any physical media, I feel more secure with. It's tangible, I can touch it.

Physical things... large format world and flash world are more secure because...?

- I have full control over it. I don't have to listen to a server admin who says our server has crashed, we lost all your information. I'm completely in control of my physical media.

I'm curious to hear your response because you said you haven't used any of the flash world in a while.

- I have one for my camera, one for my computer. That's about it.

Do agree with the idea that something you can hold, that's tangible...?

- For some things yes. At this point, maybe because I'm a whopping 31, but the price of storage has gone down relative to size. There's so much and the speed of my bandwidth for the internet has gone up equivalently that I use less and less of the things towards the top and more and more of the things towards the bottom. Things that I care about having, I will either have on cloud storage or on some external drive. I don't have a need for the other guys any more.

Do you differentiate what you put on the large format vs. the cloud?

- No. The things I put on the **[INAUDIBLE]** are for my immediate family and everything else is for anybody else, colleagues... It's more and more... last year I got 1TB of cloud storage for \$5/month. For 120 bucks, that's 12TB data, theoretically. A year ago, that's still less than a 1TB external drive would cost you. I can see in a year, everybody just gets... storage doesn't mean what it used to.

You're not making the choice any more. You're just putting it all in there.

- I look at it, but I know that... I work in finance, so at work, I need to keep things for a certain amount of time. If we didn't have cloud storage and massive servers that hold all this data, we wouldn't be able to say **[INAUDIBLE]**

0:45

- But also we make more money because we can look at things going back. We just got a 16 TB hard drive at work. That's a crazy number to think about. SPEAKING OVER EACH OTHER.

We're talking huge.

- In finance, there is more data every day than there was the day before. It's been doubling every year.

Things for you are changing in a way that's making you utilize the cloud based world more and more.

- Yes, there's faster connectivity. My phone has a faster wireless connection than I had in my college dorm room when plugged into the wall. It's 10X as fast.

Do you all agree – things are changing in the past 1 year, 5 years, 10 years?

- Oh yes, definitely. What he said exactly, the cost of storage... my first hard drive I bought was probably \$100 and maybe 50 GB. Where I bought a few years later, 250 GB storage for \$50. And much smaller. Didn't have to plug it into the wall, etc. The accessibility and cost of storage has definitely gone down.

That's changing your habits, pushing you more towards one of the worlds?

- Yes. I went from a non-iPod MP3 player, a USB drive with 120 MB and a cell phone – a Nokia phone, to an iPod which had 1000x the storage but was also much bigger, to the same phone, to an iPhone. Then I went to a smaller iPod and then a phone that replaced both of those things. Now my phone is bigger and bigger in storage but it's costing the same amount. Doesn't weigh more. Is now fast enough that I don't need to worry about connecting it. There's Dropbox on my phone, Google drive on my phone.

You are all nodding... is that true for everyone?

- Yes.

- I don't delete emails... haven't deleted an email in a long time. It's just having 3000 unread messages... [INAUDIBLE]

You have all talked a lot about business and personal. Is there a blend of those for you or are they very separate in this storage world?

- My personal storage is personal. Whatever I would store for work is different. I might use the same type of programs: Google Drive, Dropbox, etc.,

They live in the same world, but they're separate?

- Yes.
- Yes.

Do you do backups at a certain time?

- My computer does it for me. That's partly why I got it. My wife was freaking out that she was going lose everything.

You eliminated the need to remember to do it. Do you guys do it?

- My phone does it for me.

Automatically?

- I set it up to do it automatically. At least with photos, you can automatically upload things to G+ so you don't have to worry, you know you have a backup of them. Even if you delete them off your phone, they will be there.
- I have the process automated as well.

Do you do any backup yourselves?

- From my computer to my external hard drive, I'll do backups myself. A lot of the stuff I have on my computer, I don't necessarily need a copy of. It's mostly music, movie files I think I might need on another computer. Any documents...

When are you doing those things?

- Not often enough. Sometimes I'll plug my external hard drive in and look at the date of whenever it was that I last backed it up. I think I should back everything up right now.

Seeing the date that you last did it...

- I work from home, so whenever I find I need to send it wireless to my...[INAUDIBLE]

When do you see you need to...

- When working, I need to save this. I like to do it myself.

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- I do it before I get a new software update. A lot of times it makes you delete apps and things. I'll back everything up.

We're going to talk about when you're purchasing these. When you're going to buy one of these, how do you know? What tells you you need to buy one of these?

- Something is full.

How do you know something is full?

- It will tell you. It will say memory is full.

It gives you an alert. What kinds of things do you go and buy then? Is it a specific world or not really?

- If my camera memory says it's full, that's when I'll buy a new SD card. Or if I know that I'm going on a trip, I need something that has more storage, I make sure I have one available before I leave.
- When I fill something up or buying a new device. If I'm getting a new computer, I know I'm going to need a dedicate backup hard drive.
- Same.
- Black Friday or Cyber Monday when there are giant sales on media in general.

What will you buy in those times?

- The best deals. If they have 4 TBs for \$100, I'm going to buy it. That's normally way more expensive. That's large format.

What about the SD cards, thumb drives.

- I'll do the same. If it's black Friday and I might be shopping for an electronic, if I see something is on sale. They're small, you use them... for my parents cell phones, for example, if they need them I'll give it to them. If it's on sale and enough space, I'll buy it and hold onto it till I need it.

If you're going to buy something for vacation, why are you going to buy it?

- So you don't have to buy it while there. That's happened to me.

What would make you need to buy it while there?

- I was in Rome, taking pictures and it was filled up. I was abroad for another 2 months; obviously I needed to take more pictures. I went into some shady little shop, bought a cheap one. That was stupid. The next time I ever go anywhere I make sure to have an extra with me.

What are you bringing next time you go to Rome?

- I think that's the only time I use a physical camera vs. my phone. I get the little SD cards.

You're in the store, shopping for SD cards, what are you looking for?

- A deal.
- The brand. I've bought bad SD cards in China, I came back, all my data was gone. That's terrible.

- They have deals at Staples...
- I never have issues with SD cards.

What's everyone's biggest issue. [INAUDIBLE] is price. Damian – brand is important to you.

- When it comes to USB specifically – design and format. The physical compactness is important. Especially something used with a laptop, it's going into the bag. As slim a profile as possible.

Physically small. Other issues?

- Size – how much is the storage.

Which pieces?

- Any and all of them.

Thumb drives – the same things?

- You know you're not going to get as much on an SD card as on an external. For me, in a camera, 16 GB is enough. That's over 10,000 point and shoot photos.
- I also look at read/write speed of the card affects if you can take photos in burst or video, etc.

0:55

- Photography – the same thing. It goes to the brand thing. There's a certain amount of liability – certain brands will be a certain level of speed.

What about brand? Why is that important here. Other than reliability. Are there certain brands that you want or don't want?

- There are certain brands that you know are connected to those type of products. For example, SanDisk or Kingston for SD cards. I always think of Western Digital for external hard drives.
- I've had a bad experience with Western Digital. I have one external drive which is my throwaway drive, don't care about it.

You have these in your head, looking for price, brand, speed – how do you know what you're going to go in for? Do you do research first?

- Amazon reviews.
- Research Amazon reviews. A lot of times you can look at the packet and it will give comparison charts on there, which also helps.
- If I'm going out and getting something small and quick, I just need it for something small, I'm not going to look up.

What would that be if you weren't going to look it up?

- A thumb drive. The bigger the investment, the more I research.

Joaquin?

- Same.

You've done the research, know the metrics important to you. Where are you going?

- J&R – when it was open. An electronics store downtown. I liked that one specifically or Best Buy or Staples. Or Amazon.
- Unless I need it the same day, it's Amazon or if I need it the same day – go to B&H photography store. They've got everything.

Ashley?

- Jacobs store.

Even for the little...

- No, but the bigger things. I got a laptop, they set it up. Or Staples, Best Buy across from my office.

When you're either online or in-store, how do you sort through all the stuff? Does anything stand out?

- Ratings.

On?

- On products.

Is that online?

- I have Amazon Prime, you can look at reviews, etc. You can compare prices. In-store, Best Buy or Amazon – Amazon typically wins with everything.

So you're looking at ratings and price.

- I don't look at **[INAUDIBLE]** Now, USB3 is more standard, it's a lot faster. I don't look at USB 2's anymore. They cost almost the same, but there's a lot more time investment. If it's an external drive... **[INAUDIBLE]**

You're looking at the product.

- Yes... product **[INAUDIBLE]**
- Price.

When you go in-store, does someone help you? Or even online?

- In-store, yes. If you ask for help. Depends on the store you're in.

Do you ask for help?

- If I don't know what I'm going to buy exactly. I'll look at an online review before I even walk through the door.
- If it's something I'm unsure of or I'm undecided between a few things, I'll ask someone who works there.

Is that only in-store or online as well? You can ask for help... chat? Would you ask that person?

1:00

- Not really. Usually I can figure it out on my own. I'll read reviews and research it.
- I might ask somebody who has one and knows more. I wouldn't ask for help (online).
- If I have a question about shipping but that's when I know what type of product I'm going to buy. That's an after-the-fact customer service thing.
- It's a pretty straight forward thing. Not many factors involved, not much confusion. It's usually pretty straight forward. Here are what your options are. Here are the metrics. It's up to you to decide.
- It's personal, too. If you're going to go and buy a computer, is somebody going to take you through all the different types? That you can look up. If you have a specific question, I ordered this this day, this is my order number, where is it, that makes more sense. If it's more general, I'd rather ask somebody I know vs. ...

There's a trust?

- That's more direct. If you say I'm looking to buy this – oh, I own this, buy this. This is why. I already bought something, read the reviews, this is why or go to a photographer and ask vs. a person who works on that outsourced customer service who's going to read off a list of what they need to talk to you about. It's more direct.

How about you Joaquin?

- I do shopping for that stuff online. I will check Amazon for the best seller. Different people looking for the same stuff – quality, price. I do it like that.

You said you bought one on eBay.

- It was garbage.

Do you buy these new or used?

- The only reason I bought it, it was 64 GB. It was super fast. \$10. It was too good to be true. That was a one time experience.

Anyone buy used ones?

- No.
- The price point is pretty low on them; you don't need to buy them used.
- I buy a lot of my computers used but I switch out the hard drive (always) to an SSD that's brand spanking new, rather than trusting somebody's old drive that can fail on me.

You have to have this trust element that you get with a new product.

- Yes.

What makes some of the brands here rise above others?

- I've used a bunch of different brands. I've had good and bad, I don't expect my hard drive to last forever from anybody.

For you, it's not...?

- At this point I'm going to buy the most bang for my buck from a company that's... if they're above the acceptable level then they're all above the acceptable level or they're not on the list.

Anyone have a favorite brand? Start with flash/small.

- I like SanDisk, but I'm not married to them. If there's something I see that's reliable and costs less, I'll get those.

Why SanDisk?

- They're prominent. They give you a lot of options in terms of memory. That's one that I have, so I remember those. They sell them everywhere.
- Kingston. I've just always used them for small format.
- SanDisk and Kingston are interchangeable. But those are the only two I'll consider. One or the other.

What if you considered a bad one, what would happen?

- I wouldn't feel it's as reliable.

Of the reliable flash world – it's Kingston and SanDisk?

- Yes.
- There are other brands, too, those are the ones...

1:05**What other brands exist in that small world?**

- Lexar. There is also the ones that come with the products. I have an Olympus one. There is probably a Canon one. They make their own branded ones as well.

Ashley, do you use these brands?

- If SanDisk is on sale vs. some other no name brand, you'll get them when they're on sale. The reason for that is, if I buy something with a brand name to it, and I have trust in that brand, if for whatever reason it fails, I can just write to them and say this broke, I want a refund. If it's some cheap deal, they will not be as forgiving for things if something goes wrong.

Write down 3 words that come to mind you associate with the brand I wrote down.

- TV. Big... giant TVs. Android. Third word was big.

Nick.

- Big – big company. Variety – large variety of products. Standard – they generally make a fairly good product.

Standard in a positive way?

- Yes.

Ashley.

- I've never owned anything by them so I wrote down: phones, TVs, cameras.

Damian.

- I also put large. Fast – they constantly come out with new things. Korean.

Joaquin.

- Trustworthy. Old – old company. Good.

Old in a good way or bad way?

- Good way.

Natalie.

- Quality. Innovation. Reliable. I am a big Fisher-Rice fan. Have a lot of Fisher-Rice products.

1:10

- My hard drive is actually Fisher-Rice.

Sounds positive. Do you think of it Fisher-Rice positively?

- I do.

Who owns Fisher-Rice stuff? Not Ashley. Not Nick. Not Bevan. Half of us. What does Fisher-Rice make in those worlds? Where does it exist?

- My hard drive is Fisher-Rice.

Large format.

- I have a few micro SD cards.
- I've never seen a USB drive from them. They make my tablet.

Even if you don't own it, do you have an idea of where they would exist in your head?

- Yes. Those two areas.
- I would imagine they make all that stuff.

Just not in cloud then.

- Right.

Would you buy, if you haven't... and if you have, why... storage devices in this world made by Fisher-Rice. These are really positive words. But when we were talking about positive brands, Fisher-Rice didn't come up. Where does Fisher-Rice belong in this world if it's good, trustworthy, old and quality – where is it in this world?

- It did come up for me because I put it with my tablet.
- I just think that they're not known for storage. When I think of Fisher-Rice, I don't think of storage immediately, even though I have a Fisher-Rice hard drive. I think of large screen TV or phone or tablet.

Do you think they're good at storage? Do all those positive words apply to their storage products?

- No experience.
- My concern would be the software – whether it's the interface or the way they store things that try to be everything to everyone. They try to tie in to the rest of the ecosystem. That would be my concern. I like the idea of using someone who's specifically making one thing.
- Couldn't you say the same thing about Jacobs?
- But they make TVs, cars, they own amusement parks. Jacobs has 6 products. Fisher-Rice has a catalog of products.

That's your hesitation as the brand or in the memory world?

- The memory world.

They make so many other things...

- That specialization in one area is not there.

Do you agree/disagree?

- I wouldn't have thought of it that way, but the fact that they are everywhere – the fact that I don't own anything, but I know what they make.
- I didn't know about the amusement park.
- They have a university too.
- The fact that they are everywhere, it's not like I've never seen them before. I just don't happen to have that TV or tablet, etc.

Is that a good thing or bad thing for you, Ashley, that they make a lot of things?

- It's recognizable. Without knowing too much about it, the specific quality of their products – they've survived, they're able to make all these things. People clearly are buying things – maybe I should too, if I'm in the market and they have something comparable to something else.

That's favorable for you.

- Yes.
- I think the same thing as Damian. I think of them for screens. I also don't think they're the first company that made... oh it's now 104 inch TV and 2 months later, we have a 105 inch TV. That makes headlines. I'm never buying an \$80,000 television. A week later I can get the same TV for [INAUDIBLE]

All this related to storage, this is a favorable thing to storage or unfavorable?

- I just don't think of them. As storage.

- I don't think of them as storage, I think of them as products. If they decide to go into the storage game. I consider them a reliable company, a reliable brand name. I'd be willing to try it.

1:15

- I'd try it. I actually have a memory card with Fisher-Rice on it.
- The reason I bought my Fisher-Rice SSD is because it was highly ranked on Amazon. It was on sale. I recognized the brand. I didn't have any experience with them in the memory class but all those were key factors.

For Nick: If you were to buy any Fisher-Rice product, what is their specialty? What would you buy?

- Their screens are impressive – so probably a TV.

Now we're going to look at some creative (ads). Write down anything that stands out – good/bad/interesting, etc.

- The only thing I can think of recently is Western Digital came out with personal cloud storage. It was like you had your own cloud but in your house as opposed to using something Google based or something. I thought it was interesting... I looked into getting one.

1:20

To see if it's worth it. But then you can't access it from outside your house. It doesn't really make it worthwhile.

You remember an ad for that.

- Yes.

Others remember ads?

- [INAUDIBLE]
- Anything that shows a phone ad or tablet, especially the iPhone or Fisher-Rice ads – look how much space you can put on your phone.

Before we get into the individual pieces, I want to hear about what you thought about it. Reaction?

- Not a bad ad campaign. The things you need a memory card for are the things on this. It's a nice play on the number, the size of it and what you'd need it for.
- I like how clean they are. I think the numbers could be off-putting. For instance, scheme 1, first glance, I can store 64 games on this card. It's not labeling 64 what... it's obvious, 64 GB, but...

The number was confusing?

- It's not confusing, it's just not labeled. You read what's next to it, and you're used to reading GB. But it's text.
- It's too dark. The actual image.

What about the broad campaign?

- It rubs me... by the way, we do this too. Not: hey, no one's done this before.
- Generic. Doesn't tell me why this is better than anyone else's cards. Why Fisher-Rice's is better than anyone else's.

Is that something you'd look for?

- Yes.
- I disagree. In terms of an ad – if I'm flipping through a magazine, if this is just a paragraph about why this SD card is so much better, I won't really care. But if it's what is he doing... the one that hits home – hours in labor – it's okay. You're baby's being born, you don't want your camera to die. Without saying it, this is because it's reliable. The other one – a little weird, too – but the overall message is hitting home, it's personal. This is why you need it, it's your birthday, or your brother is playing games. That makes sense. If it's just going to be an ad, people aren't looking for reviews. It's going to hit them in the face. I know what Fisher-Rice is.

Do you like that message? Is it meaningful to you?

- Yes, it's relatable. You can be anybody and still have these moments in your life... if you want something to be reliable in that moment.

Anybody get anything different than what Ashley explained?

- I don't think of Fisher-Rice in terms of disks, but in screens and display quality. If you could show in a picture that it's better. Not with words. How much better is it – but numbers.
- There is nothing substantial as far as technical or reliability or comparisons. It's all very emotional. It's not an emotion-based product.
- That's what they're trying to do here...

Does that feel wrong to you that it's emotional?

- Depends on who they're marketing to. If it's a mom or somebody who's not really techy...

Say it's each and every one of you. Damian, what do you think? You say you're using these cards a lot, constantly handing them off.**1:25**

- It's definitely hitting home – it's personal, rather than the brand. Even though the logo is very large, it's an afterthought. Here at least. It's large, but it's not the focus. My attention doesn't go directly to Fisher-Rice. It goes to this number.
- I had almost the opposite in the terms that I saw Fisher-Rice, I'm paying attention to this because I like the brand. Then I see what they're saying in terms of the size of the card.

Does that match for you? Does that feel consistent?

- Because it's a brand I trust – I almost knew what they were going to say here before I read it. They're relying on the fact that people trust Fisher-Rice as a brand, to sell these kinds of cards. I wrote sentimental as my words because these are all.. other than the 64 one, which I agree doesn't make as much sense as the other two, this one I got a laugh out of. 32 hours in labor, I can relate to, ouch! You don't want to miss anything. That's when you need something you can trust.
- Now I get 16 is too sweet; 32 hours – I just thought you need 32 GB. It's a play on the number.

Now we're connecting a number to what it's saying.

- Besides the card. But I wouldn't sit and analyze an ad like this. That's great, I'm not having a kid...
- I saw that right away.

Everyone else get the number thing?

- I got it on the last page, didn't get it for all of them.
- I literally wrote, "What is she doing?" Is that a cake?
- I wrote the three colors. That gets my attention.
- That's what Fisher-Rice is going for. In general. If that's part of the campaign, 32 hours in labor, 64 games... in actuality, that's probably not true. For instance, I can have games that are 5 GB and I can only save a few of them. Same thing with labor – depending on what format you're shooting, you might only have 15 minutes...

You understand this whole GB thing in relation to...

- In a technical way.
- 64 GB is not many... what if it was 128... that would be cool, a lot of games.

What stood out for you guys?

- I put Goldilocks in general. The whole 16, 32, 64 – find the right size. Too small, too big, just the right size. 32 would be just right for me. That's how I thought of Goldilocks – find the one that's right for you.
- I like the line: Your memories are as precious as the moments that made them. Good, well written.

What does it mean to you? That's on the 32 hours in labor one.

- Also on the 16; it relates to the actual content which is the photos.

Does that hold true for you?

- Yes, I think so. It's a big part of what motivates people to do so much. Whether it's buy electronics or go on vacation? It's all about having great moments and great memories.

That's the root. What else did you note down? Bevin.

- I noticed on the cards that they had different names. On the 3 colors. The blue doesn't have a name.

1:30

I also have a 128 GB card at home. I don't consider that a problem, even though I'm not pro. But I also know that my wife who is not remotely tech savvy, would look at this picture and not have any idea what this thing is. Whereas I know what it is because I do tech things. I know my parents would definitely not know what this is.

So you like the names or don't like the names?

- I don't know what to make of the names. That's confusing.

They stood out because you didn't get them.

- Yes. I think there's a group of people who will know what this thing is. If you bought a phone, and it took one of these cards, your phone probably has one of these in it. If you didn't care or didn't know to look to upgrade, you might not. But the people here, I think, we are more tech savvy. I would look for that. When I bought my phone, I knew I had to get a bigger one because I take more pictures and my daughter will download games and I won't have a choice any more. What used to be okay at 8 GB is not okay any more.
- Obviously, this is a Fisher-Rice SD card. If I were anywhere else and this ad just showed up, I'd say this is a big orange square. I don't care what it is. Once the big orange square draws you in, and you're able to read it, then obviously... they're not this big.

You wouldn't recognize this as an SD card.

- Especially on the white. It doesn't have much... I get the shape of it and where they're going. Because we're here and the whole reason is memory card – I get it. But if this just passed by me and I had no time to read it, I'd have no idea what that was.

Joaquin – would you know this was an SD card?

- Yes. I wrote it would help to have the GB next to the number.
[INAUDIBLE]

Anything else stand out?

- I actually like the shape of it. I did identify it immediately... if it was just a box, a kid playing a game, these same words on there – I would say what is this? Even if he was holding an SD card or micro SD card, I wouldn't know what the ad was for til reading the fine print.
- I really like the blue and orange colors.

- I also see it says memory card on them, too. It's quick to realize what you're looking at even if you don't recognize it at first. 16, 32... memory card.

What else didn't you like?

- Is this red or orange?

Miscommunication between the colors?

- I prefer the orange, especially with the mother and child. Red tone is morbid.

Aside from esthetics, what about the words/messaging?

- The one on the 64 is confusing; the other 2 make more sense.

Which part is confusing?

- It says 64 gigs installed with room to spare. It sounds like it comes installed. Pre-installed card.

Does this whole idea feel Fisher-Rice? Even for those that don't have Fisher-Rice things.

- No. When the iPhone 5 came out, their whole campaign was you guys are all waiting in front of the Jacobs store and look, my phone's had that for 3 years now. When I think TVs – look, we've got the newest, biggest, best screen. Brighter, more colors, slightly curved. The way I think of it – I don't own any of their stuff, but the things that I see are newsworthy are not of the...

1:35

Hey we're here, we do this also.

That tone, that message felt un-Fisher-Rice to you.

- Yes, and along those same lines, I would think that on the pro line, you wouldn't have a 13 year old kid being a professional... if pro means what I think pro means.

Anyone else think this feels Fisher-Rice-y? Nick says no.

- [INAUDIBLE]

You feel that's missing here.

- It depends on who they're targeting. If they're not trying to be the biggest and best, etc. This, you're going to use it where you want and it's in its own... you can put videos on it... it's hey, this is another product we have and why it should be emotionally appealing to you and why you should get it.
- I agree with her in terms of being emotionally appealing. They're trying to play up the trust factor and the sentimentality of what you're using these cards for as opposed to their innovation which is what they are known for promoting, at least.

I have one more set to show you. Same exercise. Write on it, circle, cross out.

- Much better.
- Not much better for me.

What's better?

- Before it was just the card. It's a play on the word. More solid, big trunk you can put stuff in. I thought this one was stupid – the car. Made me laugh. This one was attractive in the sense that what are all these knives coming out of this thing. If you read it, it tells you it fits with everything – I wrote is that true, absolutely everything? They're more clever.

1:40

Natalie and Damian are shaking their heads.

- I liked the other campaign more. It was cleaner, I got the idea of the last one more. This one is trying to be more clever, but it's not.
- I like the race car one. It was exactly what I think of Fisher-Rice. We are better than... the same thing with the Swiss Army knife one. I agree that it will work but it doesn't work with the majority of any Jacobs product.
- Jacobs has only internal.
- Depending on your technology, it may not work with your technology. I didn't get the picture of the first one – the safe/box. I think that when it comes to the cloud storage, part of what I think about it is I use them mostly for free. Because of that, I can afford to sync things to 3-4 different places and I don't have to worry about something. If I tried to, I couldn't break a memory card in half, but I can't go to Google and Dropbox headquarters and break it. I can't spill coffee on it.

Nick?

- I like the attempt to make things more technical and offer some advances but it's not contextualized when it says 4X faster. 4X faster than what? The worst card ever made?

You tell me. Some of you are saying speed is the thing.

- It's not telling me it's the fastest card I can buy. It's telling me its 4X faster than something else.

Is there a metric for speed that they could put on here that would help?

- 10 MB per second.
- There are MB speeds. The next sentence sort of clears that up a little bit. It says 660 photos/minute. That gives me a stat to work with.
- Comparatively, does that blow away the competition?
- No.
- Is that something you can't buy from someone else?

- No.
- I like that it actually says the speed on the card, compared to the other ones. For me, the card with the circle and the number on it... the MB per second.
- All this stuff is a standard thing. Standard formatting, standard size. It's like USB3, you can't say we have a faster version of USB3 because it wouldn't be compatible with all this other stuff.

What's the message here? From all 3.

- Comes across as fast storage, you only need one.
- I think there are different messages for each one.
- The other 3 images were more consistent. This one... if I saw this first, I wouldn't know what I was looking at.
- I thought this was a garbage can.
- On these two, the angle is strange. This one is very clear.

The knife is more clear in terms of what?

- The actual thing you're going to ultimately get if you buy this.
- You'd never hold it at this angle.

You can see the memory card better?

- Yes. You can see it better. It's not giant in my face like the 3 previous photos were. But it's also not distorted into trying to fit into some other shape that it's not meant to be.
- I don't think this is a good comparison. Comparing a micro SD card to a cloud. The cloud is accessible everywhere. A micro SD card if you don't have it in your device, and you leave it at home, you won't have access. Not a good comparison.

Any other thing that are good/not good?**1:45**

- I didn't like "you only need one." I would need a ton of 32 GB.

You felt that's not true. What do you think the message is of this one?

- SPEAKING OVER EACH OTHER.
- The only people I think that make proprietary stuff is Sony. Outside of that, it's a standard. It's not like they have this universal product that nobody else is not offering.

You understand that as the message but you're not believing it?

- Right. I don't see how it differentiates it from anything else. What you're advertising more than anything is SD cards, micro SD cards, but not why Fisher-Rice is superior.
- It's not new technology.

You weren't getting that from the previous packet and still not getting it from this packet.

- Right.
- Out of all 3, this is my favorite one. I didn't get the "you only need one." I got the only one you need as that's the only type of card you'll need. You'll only need a Fisher-Rice card. That will take care of whatever you need. I wrote utilitarian – Swiss Army knife and reliable. That's out of all three of them... Fisher-Rice makes memory cards – cool. This is going back to their innovation message (race car). Fine, make good products, flip the page. Out of all of them, the knife one would catch my eye the most.
- The backwards numbers on the ruler and that's annoying.

Ashley, you agree?

- The knife one is clever, most attractive. You're looking at a magazine and you're wondering why are all these knives on this page. That's hopefully what they're going for – to catch your eye to read what the ad is about.

Does this do that for you?

- Yes. Made me... the focal point is Fisher-Rice. You read the headline. If you're still interested, you go down and then it's okay, now they have these 3 different sizes... it's pretty progressive.

Do these feel more Fisher-Rice?

- These do, generally. This one definitely.

What feels more Fisher-Rice about these for you guys?

- They're bragging.

Is that a good thing?

- Sure.
- You can brag if you can back it up. I think they do.
- The cloud one – no way. **[INAUDIBLE]**

You don't like this one.

- It was funny.
- It's physically more solid than the cloud.

Which is your favorite... hold it up. A lot of knives... one race car.**Are there any that we didn't talk about?**

- The only reason I like the car is because it says it leaves other memory cards in the dust. I would definitely research why it's faster... how it's faster.

Where would you go online?

- Amazon. Or I would Google it to compare it.

After seeing these two packets, is there anything you would add or take down from that list of Fisher-Rice? Does it make you think differently about it as a brand?

- I don't think of Fisher-Rice for memory. They still wouldn't, even with these ads... I don't think they would make any of the list of brands up there... unless they were coming... I took my battery out, and oh look, there's a Fisher-Rice memory card.
- The only thing that would stick out about these ads is I never see ads for memory in general. Memory ad, that's weird, but I guess Fisher-Rice does that now.
- It's not innovative.

1:50

- I know Fisher-Rice, but unless it comes out with 128...

This isn't the most innovative.

- Right.

But nothing to add or subtract.

Out of all the messages/ideas/imagery we've seen, tell me about one ideal ad. If we were to promote Fisher-Rice memory cards. What's the most compelling for you?

If I told you they were the lead SSD suppliers to companies like Jacobs, does that make difference to you?

- Knew that already. Makes no difference.
- Interesting because they're competitors. Maybe in the phone market, but not necessarily in the memory market. But it's interesting.

Does that change your opinion?

- No.
- It's tied to another big name.

Is that a good thing?

- It's not like they're supplying the store in China that he bought a bad one in.
- Already knew it.

Doesn't change anything. Why not?

- I don't look at my phone and wonder who makes the memory inside.

1:55

Hey, I'm buying this Jacobs phone, if it breaks I can go to Jacobs and they will fix it for me, don't have to think about that. Whoever they're willing to go with is good enough for me. I don't care about that.

- It would be different if Jacobs produced their own memory and they still used Fisher-Rice. At that point I'd say they're obviously superior.

You're thinking in your head Jacobs is using Fisher-Rice because they don't have their own memory?

- Jacobs is big enough that if they wanted to make their own memory, they'd make their own memory. It was a big deal when Jacobs switched to Intel chips. Now we can do all these other things. Now that means something.

Does this fact add to the credibility of Fisher-Rice in this memory world at all?

- Maybe. I own a lot of Jacobs products. And I do own Fisher-Rice.
- They're the same. I already knew about much of the company.

Everyone held up the knife ad. Talk to me about this message again? What is it saying to you?

- Multi purpose.
- Reliable.
- It's clear what it is also. The race card almost looks like a credit card.
- You know you're looking at a memory card.

When you say multi purpose – for what? When? Why?

- You can use it in your camera, phone, tablet. You can use anything that takes a micro SD card.
- It's not specifically designed for your phone.

Multi purpose in terms of devices.

- I was thinking more of what actually goes on it. If it's a Swiss Army knife, that all folds into it.

Multi purpose in terms of what goes on it; in terms of what devices it can be used with? Nick?

- Yes.
- I still don't get what the name lines are. [INAUDIBLE]

Those could be clarified.

Last thing. Read me your brilliant ads. Tell me about them.

- I would emphasize faster is why we're better. More durable is why we're better.

You're wanting to see speed, durability.

- I want to see why I should choose that over somebody else.
- I'd say I like the color. It caught my eye.

Is that the most compelling part for you?

- I had some things I had to mark...

You have to write on them.

- I like to be able to write on the card.
- I went back to the last campaign in terms of what I'd want to see would be the moment of use. I put that as the main focus instead of the card. That whole sentimental value as well as tying in reliability with the Fisher-Rice brand. I wrote: Moment of use. Card image... then reliable tagline.

Bringing those components together.

- And the key words of secure and reliable. Just have that be mentioned within the ad as well.
- I said something clean, similar to the first batch of ads.

Clean – aesthetically?

- Yes, the focus is very clear on what I'm looking at. I do like the text that was on the actual cards themselves. The 64 games (in the first batch). The additional text below that, to make it more personal... I feel like you're driving home the same message. If in that additional text, you gave me some additional stats as to why it's better.

Combining the two.

- I like the last two. If you had a picture of one, and picture of a better quality. The picture of the baby... and first picture taken is really shitty; the other one is so much better... it must be the picture... you don't want to risk this. Shows the use but ties back to that...

2:00

So many companies make those. Show it in use... this is why I should use it... don't leave it to your imagination of what could I use it for. Here it's telling you, if you have something important, go buy it.

Bringing that to light initially while keeping that emotional tie.

- I said the best ad would tell me why this is a better product to buy. With metrics.

Thank you!**2:01**