EXHIBIT 13
PUBLIC REDACTED VERSION

Message
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From: Brett Tanzer [█████████████████]
Sent: 1/12/2018 5:21:41 AM
To: Amy Hood [███████████████████]; Satya Nadella [████████████████ Eric Horvitz [████████████████ Jason Zander [████████████████ Harry Shum ████████████████ Kevin Scott [███████████████]; David Ku [██████████████]
CC: Jason Graefe [████████████████ Scott Guthrie [████████████████ Aditya Dalmia [████████████████ Mitra Azizirad [████████████████ Julia White [████████████████] Dave McCarthy [████████████████ Tamir Melamed [████████████████ Phil Spencer [████████████████ Kareem Choudhry [████████████████ Joseph Sirosh [████████████████ Dave O'Hara [███████████████]; Mat McBride [███████████████]; Pranav Mehra [███████████████]
Subject: Re: Update on OpenAI
Attachments: OpenAI on Azure A2N Final.pptx

The 2016 deal, where they agreed to pay ██████████████████████ was projected ██████████ ██ I've attached the original A2N for reference

We can come back with updated assumptions tomorrow if there is interest.

-Brettt

Sent from Outlook

_____

From: Amy Hood
Sent: Thursday, January 11, 2018 8:28 PM
To: Satya Nadella; Brett Tanzer; Eric Horvitz; Jason Zander; Harry Shum; Kevin Scott; David Ku
Cc: Jason Graefe; Scott Guthrie; Aditya Dalmia; Mitra Azizirad; Julia White; Dave McCarthy; Tamir Melamed; Phil Spencer; Kareem Choudhry; Joseph Sirosh; Dave O'Hara; Mat McBride
Subject: Re: Update on OpenAI

Adding Dave. He recalls about $██████████████████.

_____

From: Satya Nadella <██████████████████]
Sent: Thursday, January 11, 2018 7:59 PM
Subject: Re: Update on OpenAI
To: Brett Tanzer <██████████████ Eric Horvitz <██████████████ Jason Zander <██████████████ Harry Shum <██████████████ Kevin Scott <██████████████ David Ku <██████████████]
Cc: Jason Graefe <██████████████ Scott Guthrie <██████████████ Aditya Dalmia <██████████████ Mitra Azizirad <██████████████ Julia White <██████████████ Dave McCarthy <██████████████ Tamir Melamed <██████████████ Phil Spencer <██████████████ Kareem Choudhry

< ██████████████████ Joseph Sirosh < ████████████████ Amy Hood < ████████████████ >

How negative is this on the GM if we extend? Thx

Get Outlook for iOS

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From: Brett Tanzer < ██████████████ >
Sent: Thursday, January 11, 2018 3:31 PM
Subject: RE: Update on OpenAI
To: Eric Horvitz < ████████████████ Jason Zander < ████████████████ Harry Shum
< ████████████████ Kevin Scott < ████████████████ Satya Nadella < ████████████████
David Ku < ████████████████ >
Cc: Jason Graefe < ████████████████ Scott Guthrie < ████████████████ Aditya Dalmia
< ████████████████ Mitra Azizirad < ████████████████ Julia White
< ████████████████ Dave McCarthy < ████████████████ Tamir Melamed
< ████████████████ Phil Spencer < ████████████████ Kareem Choudhry
< ████████████████ Joseph Sirosh < ████████████████ >

I talked to Sam Altman earlier today and let him know that I hadn't found additional sponsors.   He indicated clearly that he would start looking for alternative solutions for capacity, though he would like to continue if he could. I told him I would get back to him if anything changed. We do know that his folks have been up in the area recently across the lake.

In terms of their differentiated research. Below is a link to the last presentation the gave us on their differentiated approach. A key element is the architecture they have built around Azure which enables massive scaled training within the RI domain.

https://docs.google.com/presentation/d/11eAmDRaVEUiAaTS4s3eHyHnmPaCa0LV86wyovpGNPGE/edit

Brettt

From: Eric Horvitz
Sent: Thursday, January 11, 2018 2:37 AM
To: Jason Zander < ████████████████ Harry Shum < ████████████████ Kevin Scott
< ████████████████ Satya Nadella < ████████████████ Brett Tanzer < ████████████████
David Ku < ████████████████ >
Cc: Jason Graefe < ████████████████ Scott Guthrie < ████████████████ Aditya Dalmia
< ████████████████ Mitra Azizirad < ████████████████ Julia White
< ████████████████ Dave McCarthy < ████████████████ Tamir Melamed
< ████████████████ Phil Spencer < ████████████████ Kareem Choudhry
< ████████████████ Joseph Sirosh < ████████████████ >
Subject: RE: Update on OpenAI

Just got a satellite connection working from our family expedition to Antarctica.

>Eric, Harry, Kevin – any thoughts on this?

I resonate with Harry's and Kevin's comments. I think it would be great to find a way to maintain a friendly connection with Sam, Elon, Greg, and others at OpenAI, and to continue to push on the possibilities for our researchers working together—and learning together, as primary rather than as a weak, secondary line of support for why we should be making another deep donation to OpenAI's Dota challenge.

>Eric – where you invited to the Open AI confab last weekend?

I was not invited to this meeting.

>Overall I can't tell what research they are doing and how if shared with us it could help us get ahead.

We are following OpenAI's research. I'm happy to report that they have been sharing their work openly, per their basic tenet re: "open". They are doing some nice things with RL and extensions. I've been particularly fond of some of their recent work on safety and robustness of AI systems, led by friend and colleague Dario Amodei at OpenAI (also on the board of the Partnership on AI). I appreciate the OpenAI gym effort and the community that they have created, and their recent work on RL and revisiting evolutionary algorithms. It was good to see their papers at NIPS, and there were a set of similar papers on these topics coming from elsewhere as well—per the general interest in deep RL and varients.

>They clearly are pushing AI at a level none of our first party or third parties are.

They are a good team, but we are also enthusiastic about work going on in other academic teams and at other organizations.

>Right now we are just renting/discounting HW and there is no real learning/feedback cycle back to our AI work.

Agreed and didn't see an obvious path to going beyond the "bag of GPUS" approach to Microsoft (per Kevin). When Brett brought up their pending need for phase 2 over the summer, I did a deeper dive and reached out to Greg Brockman. We got together on a skype call and brainstormed on possibilities for doing richer collaboration on advancing AI together, with trust and sharing of ideas, and angling some of their work (even in Dota) toward our interest in human-AI collaborations, centering on extending human intellect with AI—versus beating human. Suggested several ideas then. Our conversation was friendly but I didn't get the sense there was a great deal of interest in a deeper collaboration along these lines. I had the feeling that the two phases of Dota work are motivated by a need to show how AI can crush humans, as part of Elon Musk's interest in demonstrating why we should all be concerned about the power of AI.

We have research channels established e.g., via Dario and others and I'd like to see MSR folks and others at Microsoft work collaboratively with OpenAI without the need to supply many millions of dollars of support— unless we can identify other broader ecosystem or relationship benefits that have expected value somewhere near the dollars being requested.

Eric

From: Jason Zander
Sent: Wednesday, January 10, 2018 5:40 PM
To: Harry Shum <⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛ Kevin Scott <⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛ Satya Nadella
<⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛ Brett Tanzer <⬛⬛⬛⬛⬛⬛⬛⬛⬛ David Ku <⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛

Cc: Eric Horvitz <███████████████ Jason Graefe <███████████████████ Scott Guthrie <███████████████ Aditya Dalmia <██████████████████ Mitra Azizirad <███████████████████ Julia White <████████████████ Dave McCarthy <████████████████████ Tamir Melamed <█████████████ Phil Spencer <████████████████████ Kareem Choudhry <███████████████ Joseph Sirosh <██████████████>

Subject: RE: Update on OpenAI

This all makes sense and is consistent with where we have been with them since this effort started. At this point I think Azure has gotten the bulk of the value we are going to get wrt PR for core infra given the cost.

My worst case scenario is having them ditch Azure for AWS, as Kevin says bad-mouth us on the way over, and then land with some big new innovation that is shared with our competition.

To walk away from the deal altogether, I think we have to be convinced that there is no unique / valuable IP that they are going to generate which offers unique advantage to their cloud partner. If that is the case, then we will suffer some short term Azure PR fall out but are less likely to suffer more strategic disadvantages.

I think this group is required to really answer that question otherwise it'll just die by attrition.

So a concrete question: does this group want to do any final validation or should we just let it expire?

Thanks,
Jason

From: Harry Shum
Sent: Wednesday, January 10, 2018 4:35 PM
To: Kevin Scott <██████████████████ Satya Nadella <███████████████████ Brett Tanzer <██████████████ Jason Zander <████████████████████ David Ku <███████████████████
Cc: Eric Horvitz <███████████████ Jason Graefe <██████████████████ Scott Guthrie <███████████████ Aditya Dalmia <██████████████████ Mitra Azizirad <███████████████ Julia White <████████████████ Dave McCarthy <███████████████ Tamir Melamed <█████████████ Phil Spencer <███████████████ Kareem Choudhry <████████████████>
Subject: RE: Update on OpenAI

I agree with Kevin and Brett/Jason that it does not make financial sense to keep doing this undifferentiated GPU deal. I wonder if they are open to change the deal structure to make it reasonable for us.

The area I'd double down is conversational AI with NL/DL/RL.

I visited OpenAI about a year ago, and was not able to see any immediate breakthrough in AGI.

They worked on two main streams: gaming like Dota 2, and learning from observation with robots. Sam is all about gaming and beating human champions perhaps motivated by DeepMind. Some researchers at OpenAI want to use reinforcement learning to do some robotic tasks e.g. moving blocks around.

They hired about 1/3 from Toronto and other Canada schools. I had lunch with 20+ young researchers there and felt that they are good but not at MSR level. (Eric should comment.)

They also seem to have some difficulty keeping the very best, e.g. Ian Goodfellow, and a couple of others doing robotics.

Harry

From: Kevin Scott
Sent: Wednesday, January 10, 2018 2:08 PM
To: Satya Nadella <███████████████ Brett Tanzer <███████████████ Jason Zander <███████████████ Harry Shum <███████████████ David Ku <███████████████
Cc: Eric Horvitz <███████████████ Jason Graefe <███████████████ Scott Guthrie <███████████████ Aditya Dalmia <███████████████ Mitra Azizirad <███████████████ Julia White <███████████████ Dave McCarthy <███████████████ Tamir Melamed <███████████████ Phil Spencer <███████████████ Kareem Choudhry <███████████████
Subject: Re: Update on OpenAI

I'm highly skeptical of an imminent breakthrough in AGI. I know that Reid was going to the confab, and was going to report back.

On the incremental investment, I'm not sure what Microsoft is going to get out of it. It doesn't feel to me like we've earned much branding or marketing benefit from the collaboration with them so far, and I'm not sure whether anything that they've done on RL for Dota or gaming has or will benefit us. As we're pondering how an incremental investment in OpenAI could help us, I think that you also have to think about what we could do in RL if we invested those incremental dollars in our own RL competence.

IMO, they're treating us like a bucket of undifferentiated GPUs, which isn't interesting for us at all. They are not out there saying "there's this critical piece of our research that we can only do on Azure because of its technical differentiation." If they were, that could be interesting marketing. If we had some specific thing in mind on the gaming roadmap that we had high confidence this research would accelerate, that could be interesting. If we sent one of our RL experts, e.g., John Langford, to chat with them and get a sense for whether or not they're at a research tipping point that could benefit from our dollars or collaboration, that could be interesting. If we could re-purpose a bunch of what they're doing into our AI@work initiatives, that could be interesting.

None of these interesting "what-ifs" feel very likely. But it might be worth a few more in-depth conversations.

I guess the other thing to think about here is the PR downside of us not funding them, and having them storm off to Amazon in a huff and shit-talk us and Azure on the way out. They are building credibility in the AI community very fast, recruiting well, and are going to be an influential voice. All things equal, I'd love to have them be a Microsoft and Azure net promoter. Not sure that alone is worth what they're asking.

-K

From: Satya Nadella
Sent: Wednesday, January 10, 2018 12:05 PM
To: Brett Tanzer; Jason Zander; Kevin Scott; Harry Shum; David Ku
Cc: Eric Horvitz; Jason Graefe; Scott Guthrie; Aditya Dalmia; Mitra Azizirad; Julia White; Dave McCarthy; Tamir Melamed; Phil Spencer; Kareem Choudhry
Subject: RE: Update on OpenAI

Eric, Harry, Kevin – any thoughts on this?

Eric – where you invited to the Open AI confab last weekend?

Overall I can't tell what research they are doing and how if shared with us it could help us get ahead.

From what Elon is telling everyone… he feels Open AI is at verge of some big AGI breakthroughs. I know they are working to push some NPU designs etc.

They clearly are pushing AI at a level none of our first party or third parties are.

Right now we are just renting/discounting HW and there is no real learning/feedback cycle back to our AI work.

Thoughts?

From: Brett Tanzer
Sent: Wednesday, January 10, 2018 11:39 AM
To: Jason Zander <███████████████   Satya Nadella <███████████████
Cc: Eric Horvitz <███████████████   Jason Graefe <███████████████████   Scott Guthrie
<███████████████   Aditya Dalmia <███████████████   Mitra Azizirad
<███████████████   Julia White <███████████████   Dave McCarthy
<███████████████   Tamir Melamed <███████████████
Subject: Update on OpenAI

Hi Satya,
I wanted to provide you the latest update here on OpenAI since we are ███████████████████████████
███████████.

After communicating the below to Sam Altman, he came back with an alternate proposal to create a partnership with Xbox around Gaming, and an open offer to share their technology and IP in exchange for expanded sponsorship for their Dota research. His hope was that together we could accelerate the adoption of Reinforcement Learning in our game platform as a differentiation play for Microsoft. It is my understanding that the Xbox team is interested in exploring collaboration opportunities this but can't commit to covering their expanded research costs at this time.

OpenAI is deeply integrated into Azure, and have had good success with the latest fleet of GPUs, after some early growing pains.   At their current burn rate OpenAI will consume ███████████████ early in March, and will not be able to complete their research on Azure █████████. Even scoping back their research to the minimum, OpenAI still believe they need about █████████████████████████████ to complete their Dota 5x5 Research, they were hoping to get this in exchange for an arrangement with Xbox.

I am going to let Sam know shortly that we won't be able ███████████████████████ the current contract, despite our efforts to find another internal collaborator or sponsor. I believe he has been working on proposals with other cloud competitors and will likely see them move off Azure to another platform for their AI research in short order.

I do expect him to reach out to you

Brettt

From: Jason Zander
Sent: Tuesday, August 29, 2017 6:27 PM
To: Satya Nadella <████████████████████   Brett Tanzer <████████████████
Cc: Eric Horvitz <████████████████   Jason Graefe <████████████████   Scott Guthrie <████████████████   Aditya Dalmia <████████████████
Subject: RE: Congrats

Update on this one: I reviewed the GM with the team and this deal would cost us █████████████████ ███████ which frankly makes it a non-starter. For those numbers to make sense ██████████████ ██ ██

For next steps, Brett is going to talk to Sam and let him know he is finalizing the update back to Satya and wanted to talk to Sam one final time before doing that. He is going to let him know we are having a hard time getting the numbers to make sense given they are huge even for Microsoft. He will ask him if he feels we are missing anything in our analysis we should consider. Unless he can help us draw a more direct networking effect with OpenAI→ Microsoft business value, we will wind up having to pass.

Satya – we're sending you this heads up in case Brett's conversation generates contact to you from either Sam or Elon.

Thanks,
Jason

From: Jason Zander
Sent: Friday, August 25, 2017 8:25 AM
To: Satya Nadella <████████████████   Brett Tanzer <████████████████
Cc: Eric Horvitz <████████████████   Jason Graefe <████████████████
Subject: RE: Congrats

Few notes:

- We had wanted to give them an answer sooner but needed to line up the rest of MSFT

- AI&R have decided they see no value in engaging; MSR believes they have more advanced work in this space and won't benefit from the engagement

- PR/Marketing have taken your previous guidance to mean clearly that we don't want "machines beating humans" and are not supportive of any push on this

- Given this any win here would be Azure directly vs MSFT globally; I have Brett and finance ███████ ███ so we can close a decision. It lands Tuesday

Basically ██
██████████████. There certainly is some nuance in the "machines vs humans" thing but I worry we are being overly literal and I do believe the pop from someone like Sam and Elon will help build momentum for Azure. The scale is also a good forcing function for the fleet and we can drive scale into the supply chain. But I won't take a complete bath to do it.

My recommendation would be to respond back to Sam along the lines that we remain excited about our current partnership and the continued work we are doing and that you have the team finishing up their analysis right now and can finalize an answer by Wednesday. Feel free to add me to the thread as well if it helps; Brett is already working directly with Sam on the details.

Thanks,
Jason

From: Satya Nadella
Sent: Thursday, August 24, 2017 6:52 PM
To: Brett Tanzer <███████████████████   Jason Zander <███████████████
Cc: Eric Horvitz <██████████████████   Jason Graefe <███████████████████
Subject: FW: Congrats

I know we have been on this road before…. Wondering how to reply to this….

Satya
From: Sam Altman [mailto:shga@ycombinator.com]
Sent: Monday, August 21, 2017 6:15 PM
To: Satya Nadella <██████████████████
Subject: Re: Congrats

Satya--

Would you be up for a big partnership on the next phase of this (teams of 5 vs 5)?

I think it will lead to major new breakthroughs in AI but will require huge amounts of compute, probably something like ████████████████████. We could figure out how to fund some of it but not that much.

We'd love to do all the compute on Azure, and can probably get major discounts on chips (we are also fine with consumer-grade stuff, need a lot of it but it doesn't need to be ECC).

Would love to make it a joint team. I think it will be the most impressive thing yet in the history of AI.

If interested I can send more details.

Sam

On 11 August 2017 at 21:32, Satya Nadella < ██████████████ wrote:

Just wanted to pass on my Congrats on the win today!

Satya

Sent from <u>Mail</u> for Windows 10