

EXHIBIT 184

UNREDACTED VERSION OF DOCUMENT SOUGHT TO BE LODGED UNDER SEAL

From: Andrew Bosworth </O=THEFACEBOOK/OU=FIRST ADMINISTRATIVE GROUP/CN=RECIPIENTS/CN=ABOSWORTH>
Sent: Monday, May 05, 2014 2:26 PM
To: Sheryl Sandberg; Mark Zuckerberg; Javier Olivan; Mike Vernal; Dan Rose; Mike Schroepfer; Tom Stocky; Deborah Liu; Sam Lessin; David Fischer; Dan Levy
Subject: Re: Thoughts on Messenger business ecosystem

This is a very compelling vision. We have been talking a lot in the ads group about considering pay for performance arrangements (Cost Per Acquisition (CPA), rev share on cars sold, that kind of thing) and this would be an elegant way to bridge the gap.

There is one thread missing at the bottom that I would add that I think makes this even more compelling which is closing the loop with a small business CRM so we can actually use the relationship between feed and messenger to accelerate both sides of the business. For example ensuring that businesses have an ability to buy ads in feed targeted to everyone who is talking about their restaurant or interacting with their app through messenger, and then have those ads drive people to activate in messenger. This is probably at the intersection of pages, ads, messages, and identity. Sam has done a lot of thinking here already and he and I are going to connect soon on fleshing that out a bit, but it includes a ton of work on the (probably page) admin interface.

Useful language: the marketing funnel is often broken into 3 parts.

1/ The top of the funnel is driving Awareness (~\$300B annually). This is about getting people familiar with your brand, product or service. This is things like primetime TV and magazine ads. On Facebook this is video ads, lookalikes, and page likes.

2/ The middle of the funnel is driving Consideration (~\$320B annually).

This is about getting people who know about what you do to want to buy it (or buy it sooner). This is daytime TV and magazine ads. On Facebook this is Custom Audiences or link page posts.

3/ The bottom of the funnel is driving Conversion (~\$60B annually). This is about the last mile: getting someone who wants something to buy it right now. This is nighttime TV and direct mail. It is dominated digitally by Search but we actually have quite a few offerings here (offers, MAIA, App Reengagement, Link Page Post, Conversion Optimization, etc).

I mention this only because big brands spend money at all 3 levels of the funnel and chastise us for associating them exclusively with Awareness objectives. For example, I can imagine Tide being on messenger and answering questions about whether I need to separate my whites out for tide with bleach or whether I can use dove soap safely with young children.

I think it is safe to say we could shift more marketing spend towards conversion with a product like the one discussed below, but I think the even bigger revenue gains would be our ability to get more money higher in the funnel from feed if we could connect it to conversion in messenger.

Other small notes:

- Business entities: this is way more complex than it might seem but we have a good head start there with business manager for whoever ends up owning this.
- loyalty programs: data policies are critical to whether or not we succeed here at scale

boz

On 5/5/14, 8:22 AM, "Sheryl Sandberg" <sheryl@fb.com> wrote:

>Adding Fischer and Dan

>

>I love the basic vision - performance-based ads. Lots of work to do to

>make this happen so we need to prioritize, as Mark points out.

>

>I think figuring out the prioritization, especially on the

>business-facing side is important. We need to give businesses quick

>and easy - but important ways - to think of their Page or FB presences

>(whatever it might be) as their hub for mobile as there will be a huge

>push to be first in doing this and once businesses start investing,

>easier to get them to do more. The good news is that with 25M SMB

>Pages, we are ahead.

>

>One other point is that both our ads system and Google's have the

>property that we have built-in incentives for ads to be relevant and

>perform well. We need those for our ad delivery mechanisms too. I

>believe that is part of what mark is saying below - but worth calling

>out as this is so important.

>

>-----Original Message-----

>From: Mark Zuckerberg

>Sent: Monday, May 05, 2014 1:09 AM

>To: Javier Olivan; Mike Vernal; Sheryl Sandberg; Dan Rose; Mike

>Schroepfer; Tom Stocky; Deborah Liu; Sam Lessin; Andrew Bosworth

>Subject: Thoughts on Messenger business ecosystem

>

>In this note, I'm going to sketch out how I think the Messenger

>business ecosystem will work.

>

>At the highest level, I believe Messenger will be a performance-based

>ads business. That is, I expect businesses to pay us to get people to

>perform concrete actions within Messenger or within their stores.

>

>When I say performance-based ads, I am specifically contrasting to two

>other potential businesses: brand ads and payments.

>

>I do not believe Messenger is a good medium for brands ads because

>people need to choose to open messages, which makes it inferior for

>mass reach of rich content, especially compared with our other products

>like News Feed and Instagram.

>

>I also do not believe our business will be payments directly, because

>charging for payments themselves will not allow us to price

>discriminate and receive a higher percentage of the value delivered like ads do.

>

>That said, I do expect payments and transactions to be critical in this

>ecosystem. A great payment system dramatically reduces friction in all

>transactions and therefore significantly increases the value of ads.

>For example, consider the value of search ads on desktop vs mobile ads today.

>The mobile ads are worth far less because of all the friction to

>transacting: the landing pages are worse and payments are worse.

>

>So even though businesses will bid to pay us for performance actions

>like getting someone to buy something or getting someone into their

>store rather than paying us for the payments directly, building out

>payments and transactions is strategically important despite not being

>our direct business. In fact, I think our ideal strategy is to give

>away payments for free -- or at no profit margin for ourselves -- in

>order to build up the transactional capacity of our network so we can

>ultimately have the best performing ads business.

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>

>Like any ads business, the two levers to understand its potential scale

>are how many ads you can show and how well the ads perform.

>

>I'm going to start by outlining some of the touch points for people to

>interact with businesses in Messenger. Further below, I'll outline a

>framework for how many ads we can show at different stages in the

>evolution of this business.

>

>At the most basic level, there are three ways that I expect people will

>interact with business content:

>

>- A business can send you a message just like a person can today.

>Alternatively, you can send the business a message and it can reply.

>

>- We will have a discovery tab within Messenger where, in addition to

>highlighting organic suggestions like people nearby, we can also

>highlight relevant businesses, paid content or suggest apps to install.

>

>- While you're in a thread messaging with a person, we can show content

>inline if it's very relevant to your conversation.

>

>I'll discuss how much inventory will be available in each of these in

>more detail below, but for now I just want to call out that while the

>first and third touch points will eventually make up the vast majority

>of our inventory, they each need to have an extremely high quality bar

>before we start inserting any paid content there. The discovery tab

>will have much less traffic, but it will be very important for building

>this ecosystem by enabling people to engage with businesses organically

>as we build enough scale and quality to fill the first two touch points

>with good content.

>

>You can think about the discovery tab roughly like how we or Google

>thought about our right hand column ads before putting ads in News Feed

>or on top of search respectively. It's lower volume but enough to start

>building quality and building the business.

>

>Next, I'll go through each of those three basic touch points in a bit

>more detail.

>

>-----

>

>The first touch point is message threads with businesses.

>

>This branches into two very different experiences: a business messaging

>you out of the blue, and you messaging a business and it replying to you.

>

>The first experience -- a business messaging you out of the blue -- is

>where I expect most of our business to be over time. However, it's also

>one of the most sensitive experiences that we need to be careful with.

>The whole value proposition of Messenger is that it is a high signal

>channel where every message you receive has an expectation of intimacy

>and urgency. If we start buzzing your pocket with ads daily, then we

>could easily destroy this experience.

>

>There are a couple ways around this over the long term. The first is to

>not send you a push notification for these messages, so you just see

>them in your inbox when you open the app but they don't interrupt you

>otherwise. A "silent message" like this is a new behavior we'd have to

>build since it doesn't exist today. WeChat and Line both support this

>notion today. The second is to make sure the quality is high enough so

>people actually want these pushes. My guess is that we'll eventually do

>both: we'll have silent messages for most paid messages, but for ones

>that are very relevant we will consider doing pushes.

>

>As we phase these in, we'll need to make the product perform such that

>most businesses pay on a per-action rather than per-impression basis.

>The basic math of this is that even in the limit there will be so many

>fewer impressions here than in News Feed < both because total time

>spent is lower in Messenger and because the intimacy of the product

>affords fewer intrusions < that if we only support the same kinds of

>advertiser value propositions we do in News Feed, this will never be as

>big of a business for us as we hope.

>

>Instead, I think we will need to do the hard work to make payments and

>offers work frictionlessly inline. This can create much higher value

>impressions < more similar to search < that take advantage of the

>intimate and interruptive nature of the environment. For example, a

>business will be able to message people with specific offers when

>people are nearby and people will be able to redeem them inline,

>include paying right there.

>

>Even though this is fundamentally structured as an ads auction, a large

>percent of the work will be doing everything necessary to make the

>payment experience seamless so these offers actually convert and

>deliver value for both people and businesses. It will be easy for us to

>underestimate the amount of payments work required here compared to ads

>work since we have historically focused on ads rather than payments,

>but I expect there will be a very deep thread of work to do to make

>this payments experience integrated enough < both into people's

>accounts and businesses' workflows < that this experience really works end to end.

>

>If we can pull this off, then we can enable experiences like you're

>walking down the street and get a notification for a personalized offer

>to a nearby shop based on your identity and history there. You can open

>the notification and tell the cafe or store what you want, pay inline,

>and have it ready for you as soon as you walk in, all while receiving a

>discount and building a profile to have better personalized experiences

>in the future.

>

>Interruptive examples like this may be the long term, but before we get

>there we will likely want to explore silent messages first since

>they're less disruptive. These can still be a good testing ground for

>inserting relevant nearby content when you're in the app.

>

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>

>Regardless, even silent messages are disruptive to the high signal and

>intimate feeling of the product today, so I wouldn't even start there.

>Instead, I'd start by building person-initiated threads with businesses

>and over time work up to enabling businesses to message people out of

>the blue.

>

>That brings us to the second experience -- you messaging a business and

>having it reply to you. In the Messenger business ecosystem, a thread

>with a business is the equivalent of a page on Facebook. It will be

>relatively low frequency that a person visits this thread -- just like

>it's relatively low frequency that a person visits a business page

>directly -- but it's a fundamental part of how businesses exist in the

>ecosystem and an organic way that people can interact with them.

>

>The next question is how will the business actually reply to messages?

>

>The naive answer is that the business owner can reply when they get

>around to it. I think we can support this behavior, but this is very

>slow and not a great experience for the person messaging the business.

>

>Instead, I think we should build an automated system that understands

>basic natural language so that business entities can respond

>automatically and instantaneously to people.

>

>This would enable businesses to respond to both informational questions

>like "Are you open now?" as well as actionable questions like "Can you

>make me a tall mocha frappuccino?". In the first case, the business,

>could just answer with the information. In the second, ideally this

>would then ask the person to pay inline in the thread and then tell a

>barista to start making the frappuccino so it would be ready as soon as

>you walked into the Starbucks.

>

>There are a few reasons this is a very powerful new way to interact

>with businesses, especially local businesses. First, everyone knows

>language but people hate calling businesses, so texting is a natural

>way to interact that doesn't require learning anything new. Second, the
>payment experience can be stored and optimized, which takes a huge
>amount of friction out of these interactions, especially compared with
>web-based interfaces or other apps you'd have to install. Third, most
>businesses you want to interact with will be on Messenger eventually,
>which is vastly preferable to using a large number of different apps.

>

>I expect that when you want to interact with a business, you'll search
>for them on Messenger and then begin a message thread with them. Before
>you send a message, I imagine each business will have some default
>message that starts every thread with them. This default message can
>outline what things the business knows how to do on Messenger, like
>order a frapuccino, buy tickets or so on. This message can also contain
>structured links to different functionality directly, so you can do
>some things without having to type any text at all. We should look at
>what others have done here, like WeChat, for example, has links to
>inline ³stores² that graphically list the business's inventory and let
>you browse and purchase inline.

>

>You'll also be able to type whatever you want, and we'll have to build
>a system that is smart enough at understanding your input and easy
>enough for businesses to configure for themselves that we can take your
>input and map it to what the business knows how to do, or at least come
>up with some other intelligent response.

>

>It will be difficult to build a good natural language system like this
>and it will require real investment, but it should be possible. The
>technological advantage we'll develop doing this will also be a
>competitive barrier for other messaging products like WeChat that try
>to compete with us for either consumer attention or business dollars.

>

>Over time, it will be possible for our systems to deliver more nuanced
>responses. It will also be possible to deliver types of replies that
>don't make sense in traditional search- or web-based interfaces, like
>time-delayed replies or follow-on replies later when more information
>becomes available. You should be able to ask a business a question like
>"tell me when a table becomes available" and in addition to being able
>to reply immediately to confirm it will do this, it should also be able
>to message you at a future point when it has the answer to your question.

>

>It's worth noting that time-delayed responses to person-initiated
>messages could be a great way to ease people into getting push
>notifications when businesses message them. We should probably ease
>people into this use case by building organic use cases like this
>before enabling purely paid messages that send push notifications.

>

>In addition to being able to message businesses back and forth with
>text, we will want the ability to send money and other kinds of
>structured data
>-- like loyalty card data -- as well. These kinds of interactions will
>be necessary to make sure that businesses actually get value from
>interacting with people on Messenger, especially since the branding

>value will be relatively minimal.

>

>Payments as a primitive is simple to explain but will be very

>complicated to fully implement. Within a messages thread, anyone should

>be able to either send money to or request money from anyone else.

>Within the UI, this would take the form of another kind of content you

>could attach to a message, just like a photo, sticker or voice clip.

>

>To make this really work as a social behavior, we'll need to create a

>social norm around people being comfortable sending money through

>messaging. To make this work as a product, we'll need to make it

>frictionless and cheap, which means we'll need credentials on file for

>large percentages of people. Over time, we'll need not only credit

>cards but also bank account information so we can make transfers cheap.

>

>A whole thread of our strategy is going to need to be focused on

>increasing payments usage and helping people add credentials. We'll

>need to support use cases like person-to-person money transfer to help

>establish this norm, even though it won't be a direct revenue driver

>for our business. As part of this, I imagine we're going to need to run

>constant promotions like WeChat has to encourage people to pay and

>transfer money in different ways -- as gifts on new years, paying for

>taxis, investing in mutual funds, etc. This is a very deep thread of

>work that will require a lot of work, but will ultimately be necessary

>for making the ads and interactions that businesses pay for valuable.

>

>In addition to investment of people on our teams and financial

>resources, we'll also need to dedicate real estate within our app to

>this promoting interactions with payments. At a minimum, I expect

>payments will be a permanent item within the message composer in

>message threads, a major part of the real estate on the Settings tab,

>and initially a large number of the promotions and recommended content

>on the discovery tab. We'll also need to do significant work on the

>business side, probably integrating into our own business-facing UIs

>like Page Manager as well as making sure we support businesses' own payment systems.

>

>Another example of structured exchange between people and businesses is

>loyalty programs. We should be able to build the best loyalty programs

>in the world based on our understand of people's identity and locations

>coupled with the business interfaces we've built. If you can message a

>business to initiate a loyalty card / relationship and then ever time

>you go to that business from then on you get a message updating you on

>your status and available offers, that could be very compelling.

>

>Of course, a lot of the nuance of designing business threads is going

>to come down to important details around how interruptive they can be,

>what they need to do to get permission to be interruptive, how easily

>you can mute them or turn them off, and so on. These rules can evolve

>over time, but making sure we get them right at each stage will be very important.

>

>Finally, it's worth noting that even though everything I've discussed

>here has been in the context of businesses, these kinds of business

>threads should be available to anyone who would currently have a page
 >on Facebook today, including celebrities, politicians, bands and other
 >types of entities that we don't typically think of as businesses but
 >who produce important content for our ecosystem.
 >
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 >
 >After message threads, the second business touch point is the discovery
 >tab.
 >
 >Imagine this tab as a new second tab in the app's main navigation,
 >between Recent and Groups.
 >
 >The primary purpose of the discovery tab is to introduce people to new
 >people, businesses and content that can improve their messaging
 >experience.
 >
 >This is important because people will not just wake up one morning and
 >start messaging businesses. First, we need to introduce the idea of
 >businesses within Messenger to people and show people how they can be
 >useful. The brute force way of doing this would be by starting to
 >inject business content into the main inbox that the person had not
 >directly asked for yet. That seems dangerous and unnatural, so the
 >alternative is giving people a space where they can discover this
 >business content on their own and start messaging businesses themselves
 >rather than just having businesses start messaging them out of the blue.
 >
 >Of course, this presents its own problem: why would people ever go to
 >the discovery tab? The answer is that we have to include content here
 >that is relevant not just to the business ecosystem, but also for the
 >social experience people are looking to have with Messenger.
 >
 >For example, you could imagine an early incarnation of the discovery
 >tab being called Nearby and focusing on people and business that are nearby.
 >We could use Aura to show friends nearby, highlight friends visiting
 >from out of town and potentially even show other people nearby if they
 >want to meet new people -- which is a very popular feature on WeChat.
 >We could expand it beyond Nearby over time to include friends with
 >birthdays or major life events, etc. I think this tab would quickly
 >become more useful and more used than the static Groups and People
 >tabs, which is why I suggested we'd place it second in the nav above.
 >
 >Once we build an experience here that is organically useful, the second
 >stage is to insert business-related content to educate people about the
 >value of the business ecosystem we're building. We could highlight
 >businesses that can do useful things over Messenger and get you to
 >engage with those first. Perhaps we'd start by making partnerships with
 >a few chains or larger companies to increase the coverage of people who
 >would have relevant business content here.
 >
 >For example, we might make a nationwide deal with Starbucks that
 >enables you to order drinks through Messenger. You could tap on

>Starbucks in nearby and it would create a thread that would sit in your
>inbox from then on. When you first open the thread, you'd see
>Starbucks's default message and maybe some structured menu items, and
>you could tap or type to order something, pay inline, and then when you
>show up the barista will have your drink ready and hand it to you,
>knowing who you are because your identity shows up on an iPad at the cashier.

>
>Beyond Starbucks, another good example could be ordering a cab. This is
>worth mentioning because it's how WeChat started building up their
>payment base, and we are currently in discussions with Uber about doing
>something similar with them. That said, I don't think WeChat made this
>a great experience beyond just sending you to the taxi app, so there's
>a lot more we'd want to do here as well. I'll get into that more below.

>
>Initially, I expect we'd highlight these businesses on Messenger for
>free or very cheaply. But once we have a good number in there, then the
>third stage of evolution for the discovery tab is to turn this into a
>market and start charging for paid placement in addition to showing
>good organic people and business content.

>
>As I said above, the discovery tab is like the right hand column of
>Facebook or Google. It will be enough volume to get some interesting
>behaviors going within the ecosystem and to start building the
>business, but given the much smaller volume of visits compared the main
>inbox, this will never turn into a huge business by itself. This
>roadmap by itself is a stepping stone to the main business of
>interacting with businesses in the main inbox by getting people used to
>engaging with businesses in Messenger.

>
>One open question is whether we want to use the discovery tab to only
>promote business interactions on Messenger, or whether we want to run
>more general ads here, including app install ads.

>
>The argument for app install ads is that it's easier and more
>understandable for businesses, especially early on. For example, the
>taxi integration that WeChat did was primarily just about driving app
>installs to the taxi app rather than doing much actual integration.
>It's easy to imagine how we could make some money adding app install
>ads, especially early on, before we had a full business ecosystem.

>
>The argument against app install ads is that any space we allocate to
>them has a large opportunity cost against building the business we
>eventually want in the main inbox. Any app install ad that sends a
>person to another app is a wasted opportunity to educate people on
>interacting with businesses in Messenger. Arguably, WeChat is stuck at
>the stage of running ads in a secondary discovery tab because they took
>the easy money and never built out a full enough ecosystem to be able
>to monetize the main inbox where most of the traffic is. They're still
>doing at a bit more than ~\$3 per person annually, but our goal is to
>reach the monetization levels we see in News Feed of greater than \$10
>per person, if not more.

>

>There are other types of content to consider, like stickers or
 >in-message games. These could help us make money, but they will also
 >have the property that they make Messenger better for people and get
 >people more invested in the product. So these are a different kind of
 >tradeoff and opportunity cost that we'll have to weigh when we get
 >there. It's easy to say these things are silly, but I think this is how
 >WeChat and Line make 30-50% of their revenue today.
 >
 >My guess is that we'll want to experiment with all of these things but
 >will need to be careful. We'll need to be disciplined about starting
 >off by building a valuable people-centric consumer experience, then we
 >can add some business content with the goal of educating people that
 >you can have good business experiences within Messenger. Only after
 >these two should we really think about adding other content and making
 >any real money from the discovery tab itself.
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 >
 >After message threads and the discovery tab, the third business touch
 >point is inline during message threads with people you're talking to.
 >
 >This is different from the ecosystem of interacting with business
 >entities described in the first two touch points above because in this
 >case you're not actually communicating with a business.
 >
 >Instead, this plays on the technical work we're going to have to do to
 >understand the context of messages in order to support automatic,
 >instantaneous replies from business for the above use cases. Once we
 >have the technical ability to do this, we can use it to show relevant
 >context in other places as well.
 >
 >The basic idea here is that if you ask a friend a question as part of
 >your message thread with them and we know the answer, it could be
 >useful for to show you the answer inline in your conversation. For
 >example, if you ask a friend if a movie is playing or when an event is,
 >we can quickly add that information to the thread. If you ask your
 >friend if they want to get dinner but you don't know where to meet, we
 >can also show suggestions inline.
 >
 >Intuitively, this seems like it would be useful, but there's a very
 >high quality and relevance bar before this becomes annoying. It would
 >be very easy to create terrible experiences by inserting the wrong
 >information at the wrong times. Because of this risk, we should be very
 >conservative about when and how we insert information while we're ramping up.
 >
 >It's worth noting that what businesses pay us for here will be
 >different from in the ecosystem above where people interact with
 >business entities directly. In the ecosystem of interacting with
 >businesses, person-initiated interactions are free for businesses, and
 >businesses will need to pay for distribution to get in front of people
 >in non-person-initiated cases. In a way, this has similarities to a
 >traditional display ads business. However, this next ecosystem of

>inserting relevant context inline is closer to a traditional search
 >business. We can show only show relevant context inline in response to
 >the right prompt, and when that prompt appears, we can show whichever
 >bit of relevant context we think is most valuable, taking into account
 >both engagement and revenue.
 >
 >Because this is a different kind of business, we could postpone
 >developing this touch point until later and just focus on the touch
 >points above for the first few years.
 >
 >However, the technology required to understand natural language context
 >to power this touch point will be significantly overlapping with the
 >technology required to build the first ecosystem above, so once we've
 >developed it I see little reason to wait to get started here.
 >
 >Further, getting good at showing relevant content in response to
 >contextual cues is something we're already working on in Utility with
 >After Party, where we show relevant contextual information after you
 >check in or post with other structured minutia from the composer in our
 >main app. That means we should be able to take that team's effort,
 >apply it to Messenger and start seeing an early experience here without
 >many months of work.
 >
 >Focusing After Party on Messenger is also about where there's the most
 >leverage. There are currently only ~50 million After Party-eligible
 >actions in the main composer today, so the ~7 billion mobile messages
 >in Messenger and >20 billion in WhatsApp should be a more leveraged
 >surface to redirect this work once it's a good experience. Even if only
 >1% of messages have any relevant context for an After Party experience,
 >that would still be more After Party actions in Messenger alone than in
 >the main app.
 >
 >---
 >
 >There are other threads of work related to contextual understanding and
 >inline replies as well.
 >
 >One question I've thought a lot about is how people will find the right
 >businesses to message in the first place. One possible answer to this
 >is that you'll search for them. For example, if you want to see if a
 >restaurant is open or get reservations, you could search for that
 >restaurant and then ask it your question. But this seems clunky to me.
 >
 >So much of the value in the messages UI paradigm is that it's not search.
 >If people wanted to use search to find out something about a business,
 >it's probably easier to just use Google. The reason people would use
 >this is because it's a more natural and less search-based UI than where
 >Google is today.
 >
 >There's a good reason to believe the future of search is moving in this
 >direction -- and it's that even Google (as well as Microsoft and Apple)
 >seem to think it is. They're all focused on building the next version

>of their search products as digital assistants that you communicate
>with by asking conversational questions, and they try to provide you
>with answers rather than a list of links.

>

>If search companies think that conversation is the future of search
>rather than initiating queries by searching, then why would we want our
>conversational UI to be initiated by searching? It doesn't make much
>sense.

>

>Instead, what makes more sense to me is that we'd develop our own kind
>of assistant that lives inside Messenger. Think of it as the entity
>"Facebook" and you could message it just like you'd message any other
>business in this system. The only difference is that this entity
>performs one special task that the others don't -- it mediates between
>all of the other entities. If the other business entities act as
>digital assistants for interacting with those businesses, then the
>Facebook entity is a sort of meta-assistant that helps you interact
>with all of those other assistants. This means that instead of ever
>having to search for a business, you could just message the Facebook
>business entity and it will connect you with the right business entity directly.

>

>For example, you could ask this special entity when some business is
>open until, and this entity would be able to do two things: first, it
>could communicate with the other entity in the background and answer
>your question for you; and second, it could connect you directly to the
>right entity to talk to in the future so you don't have to search for
>it yourself.

>

>This may sound very abstract and complex, but I actually think it would
>be relatively simple to build once we had the technology we needed for
>business entities to make automatic, instantaneous replies themselves,
>which is required to build this ecosystem anyway.

>

>Once we have that technology, then we'll already be able to understand
>the meaning of many questions. We'll also already have a registry of
>what businesses know how to answer which questions and do which things,
>since this is required for us to have them reply automatically. With
>these pieces, building this meta-assistant is just a matter of enabling
>our special Facebook entity to answer any question that has a
>registered response from any other entity in our system.

>

>The biggest technical problems we'd have to solve would be figuring out
>which of the entities that say they can answer a question are actually
>the best to do it.

>

>For example, if I message Facebook and say I want a taxi, then we will
>likely know of multiple services that have registered with us to be
>able to answer queries about wanting a taxi, so we'll need to decide
>which one is best and connect you with that service. The solution here
>will be a mix of machine learning reputations and quality scores for
>the different entities, plus figuring out how we accept financial bids
>in our system. I assume that if we are in a position where we're

>deciding which taxi service you're going to use, then we will make
>money from whichever service we send you to.
>
>This meta-assistant vision may seem far-fetched right now. It's
>possible we don't need to start working on it today. But I would. From
>two different perspectives, this seems like the right approach. First,
>digital assistants from Google, Apple and Microsoft are becoming more
>useful and important over time, so I don't see why this metaphor
>wouldn't hold for us too. Second, this really is the simplest way to
>interact with all of the different businesses in our system. It's much
>better than searching and starting a thread yourself.
>
>If we follow this approach, I think there's a good chance our
>meta-assistant could become the most useful of all. Google and everyone
>else are building their assistants by trying to have a single
>search-like system understand everything. We're taking the opposite
>approach by having everyone create individual entities, and then we're
>just linking all those different entities together.
>
>In the real world, there doesn't tend to be one person or assistant
>that you want to ask all your questions to. There are lots of different
>people you ask different questions to. We're constructing our system
>the way people interact in the real world. There would be one
>meta-assistant that could help you navigate who you talk to, but in
>general you'd be asking questions and interacting with different domain
>experts rather than always with a single assistant.
>
>If we can succeed in building the most useful assistant -- for which
>the most important step would be getting as many businesses as possible
>into Messenger -- then this could actually be the future of search in
>addition to a big part of the future of advertising and commerce.
>
>-----
>
>Those are all of the main touch points for people to interact with
>businesses in this ecosystem.
>
>Now here's a list of all the different threads of work that I discussed
>above.
>
>1. Business entities
>
> - Entity accounts and scaffolding
>
> - Natural language response system
>
> - Menus and structured stores
>
> - Loyalty programs
>
> - Policies around when businesses can message and interrupt you
>

- >2. Payments
 - >
 - > - Basic primitives of sending and requesting money
 - >
 - > - Optimizing friction, credentials and rates for people
 - >
 - > - Integrating with businesses' workflows
 - >
 - > - Promotions and deals to drive adoption and credentials
 - >
- >3. Discovery tab
 - >
 - > - Nearby people recommendations
 - >
 - > - Business entity recommendations
 - >
 - > - App install ads
 - >
 - > - Other content, like stickers and games
 - >
- >4. Inline content suggestions
 - >
 - > - After Party for messages
 - >
 - > - Inline games
 - >
- >5. Meta-assistant
 - >
 - > - Registry of all entity knowledge and actions
 - >
 - > - Mediate requests with multiple handlers
 - >
 - > - Special UI for meta-assistant
 - >
- >6. Ad system integration
 - >
 - > - Auction for inbox messages and discovery space
 - >
 - > - Performance-based bid options
 - >
- >7. Language technology investments
 - >
 - > - Natural language research
 - >
 - > - Voice recognition improvements
 - >
- >-----
- >
- >Thanks for reading all the way through this. I know it was very long,
- >as I tried to be as detailed as possible. I'm looking forward to
- >discussing further soon.
- >

