EXHIBIT 169 UNREDACTED VERSION OF DOCUMENT SOUGHT TO BE LODGED UNDER SEAL

From: Charles Jolley </O=THEFACEBOOK/OU=EXCHANGE ADMINISTRATIVE GROUP

(FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=CHARLESJ>

Sent: Monday, September 03, 2012 11:25 PM

To: Mike Vernal

Cc: Sam Lessin; Douglas Purdy; Justin Osofsky; Chad Heaton; Matt Wyndowe; Deborah

Liu; Jon Eide

Subject: Re: Platform Market Estimates: Write-API v0

Per Doug's request, I recalculated the expected rev for basic read APIs to include all calls to the Pages and App APIs (in addition to User and Photo APIs outside of canvas). I applied the same growth rate math we get:

API Usage Fees on Current > 2013 - \$7M, 18mo RR - \$9M

Also - I noticed that the deck now shows our 2013 @ \$6M with an 18mo RR @ \$100M. I don't see how charging for our current read APIs gets anywhere close to that.

For one, the vast majority of based data reads happen on canvas today. For those that do not, the integrations tend to be light touch and/or intended to work around limitations of our sharing system [such as not being able to precision target users with our requests dialog.]

I don't see a value exchange with enough developers that makes sense at this level. The most likely outcome if we start to charge is that many devs will simply stop using us.

Maybe it's not important since a \$10, or \$20, or \$100 projection wouldn't change the outcome of our decisions at this level, but my guess it you will get questions about it at the very least; it looks funny.

-C

Charles Jolley

Facebook, Inc.

On Monday, September 3, 2012 at 11:15 PM, Mike Vernal wrote:

Cool - everyone else - let me know if you have any edits in the next 15 minutes. I'll plan to send to Anikka at 11:30pm.

From: Sam Lessin <sl@fb.com>

Date: Tue, 4 Sep 2012 01:54:32 -0400

To: Mike Vernal <vernal@fb.com>, Douglas Purdy <dmp@fb.com>

Cc: Charles Jolley < charlesj@fb.com, Justin Osofsky < josofsky@fb.com, Chad Heaton < chadh@fb.com, Matt

Wyndowe < mw@fb.com >, Deborah Liu < debliu@fb.com >, Jon Eide < joneide@fb.com >

Subject: Re: Platform Market Estimates: Write-API v0

Vernal,

Updated per your suggestions — I am handing you the deck now because I am about to go to sleep (I am an early to bed early to rise kinda guy) -- when you are happy can you please send to Anikka tonight for circulation

sam

From: Mike Vernal

Date: Monday, September 3, 2012 10:46 PM

To: Sam Lessin <<u>sl@fb.com</u>>, Douglas Purdy <<u>dmp@fb.com</u>>

Cc: Charles Jolley <charlesj@fb.com>, Justin Osofsky <josofsky@fb.com>, Chad Heaton <chadh@fb.com>, Matt

Wyndowe <mw@fb.com>, Deborah Liu <debliu@fb.com>, Jon Eide <joneide@fb.com>

Subject: Re: Platform Market Estimates: Write-API v0

Sorry, continue to read through this and think about it - trying to respond in real-time.

Two more thoughts:

Slide 9:

- The Contextual Ads part is really not part of the "Write API" it's really a separate topic. Here's what I would change:
- Ditch the two contextual ads line items
- Add another bullet after those channels that says "Apps bid on install-value and reengagement value, and we optimize across all these channels" to acknowledge the way Mark wants to charge for this

Add Slide:

Title: Become a Marketplace

- Current OG Sponsored Story Problem
- Our best developers can generate good OG actions, but don't have a lot of money to spend on advertising
- Our best advertisers have a lot of money to spend on advertising, but can't generate OG actions
- Many early developers have a product, but lack a business model / revenue stream
- Solution
- Enable advertisers to attach sponsored actions to OG content
- Mike read a book on Goodreads Buy on Amazon
- Sam rated a movie on Rotten Tomatoes Watch on Netflix
- Sponsoring boosts story and attaches a prominent UI action link
- Rev-share with developer to align incentive and provide revenue stream
- Long-term
- If/when we are inventory constrained on Facebook, enable developers to attach these links on their own sites

Slide 10 (will now be Slide 11):

- I'd probably put "Marketplace" on the left, next to "Monetize partner data + give them a cut of the value." (We're monetizating both distribution + data, but what we're really doing is building a marketplace between advertisers + data generators.)

From: Sam Lessin <sl@fb.com>

Date: Tue, 4 Sep 2012 01:28:11 -0400

To: Douglas Purdy <dmp@fb.com>, Mike Vernal <vernal@fb.com>

Cc: Charles Jolley <<u>charlesi@fb.com</u>>, Justin Osofsky <<u>josofsky@fb.com</u>>, Chad Heaton <<u>chadh@fb.com</u>>, Matt

Wyndowe < mw@fb.com >, Deborah Liu < debliu@fb.com >, Jon Eide < joneide@fb.com >

Subject: Re: Platform Market Estimates: Write-API v0

And of course we aren't charging for that ;)

S

From: Douglas Purdy < dmp@fb.com>

Date: Monday, September 3, 2012 10:26 PM

To: Sam Lessin <<u>sl@fb.com</u>>, Mike Vernal <<u>vernal@fb.com</u>>

Cc: Charles Jolley <<u>charlesj@fb.com</u>>, Justin Osofsky <<u>josofsky@fb.com</u>>, Chad Heaton <<u>chadh@fb.com</u>>, Matt

Wyndowe <<u>mw@fb.com</u>>, Deborah Liu <<u>debliu@fb.com</u>>, Jon Eide <<u>joneide@fb.com</u>>

Subject: Re: Platform Market Estimates: Write-API v0

also, games can already take over the full screen.

On Sep 3, 2012, at 10:23 PM, Sam Lessin <<u>sl@fb.com</u>> wrote:

All edits taken except | didn't take the canvas point — true mark has talked about it, but we talk about canvas nowhere in this deck / it is really about OG not the other parts of platform.

From: Mike Vernal < vernal@fb.com >

Date: Monday, September 3, 2012 10:13 PM

To: Sam Lessin <<u>sl@fb.com</u>>, Douglas Purdy <<u>dmp@fb.com</u>>, Charles Jolley <<u>charlesj@fb.com</u>>

Cc: Justin Osofsky <<u>josofsky@fb.com</u>>, Chad Heaton <<u>chadh@fb.com</u>>, Matt Wyndowe <<u>mw@fb.com</u>>,

Deborah Liu <<u>debliu@fb.com</u>>, Jon Eide <<u>joneide@fb.com</u>> **Subject:** Re: Platform Market Estimates: Write-API v0

Slide 10:

- Isn't it a "cost-recovery+" model, not a "value-based pricing" model? We're not going to charge different amounts for different API calls, right? Also, I would move the developer fee here (from Slide 11). Slide 11 feels like controversial proposals. I actually think charging for API usage is more controversial than developer fee, so I'd just include developer fee here. How about:

"Charge developers for launching apps (\$100/year) and for use of APIs (on a cost-recovery+ pricing model), starting with a graduated pay scale charging larger developers more"

- Can we change "Introduce concepts which allow us to be comfortable with some uses of our data (reciprocity?)" to "Require data reciprocity as a principle and a policy; for top partners/competitors, require a deal where we can let users import their data in exchange for read API access."

Slide 11:

- I would kill developer fee from here.
- I would add a separate point which is to shift our API from being UID-based to having app-specific user IDs, which I think merits conversation. I think this is separate from the contact info point, but worth discussing.

3

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NB:

Two other opportunities Mark mailed us about where (a) not showing ads on canvas and (b) allowing custom GDP. It feels like we should at least mention them so we can discuss, though we obviously don't have any #s yet for them.

Otherwise, this lgtm.

From: Sam Lessin <sl@fb.com>

Date: Tue, 4 Sep 2012 00:55:58 -0400

To: Douglas Purdy <<u>dmp@fb.com</u>>, Mike Vernal <<u>vernal@fb.com</u>>, Charles Jolley <<u>charlesj@fb.com</u>> **Cc:** Justin Osofsky <<u>josofsky@fb.com</u>>, Chad Heaton <<u>chadh@fb.com</u>>, Matt Wyndowe <<u>mw@fb.com</u>>,

Deborah Liu <<u>debliu@fb.com</u>>, Jon Eide <<u>joneide@fb.com</u>> **Subject:** Re: Platform Market Estimates: Write-API v0

Ok — here is latest draft

•••

- Took all of Vernal's edits.
- The reciprocity thing is a fine principle to bring up in my mind, but it fits under the real heading which is that if you use our read APIs, you need to talk to us and we will negotiate a deal with you... but we should def t-up the convo
- The numbers still make me uncomfortable / I don't really feel solid about most of them, but scanning down I don't think we are off by orders of magnitude anywhere, so it seems reasonable to me.

Please anyone speak now or hold peace for tomorrow... If I don't hear within the hour I am going to send as a provisional draft to the group for tomorrow

Sam

From: Douglas Purdy < dmp@fb.com>

Date: Monday, September 3, 2012 9:43 PM

To: Mike Vernal < vernal@fb.com >, Charles Jolley < charlesj@fb.com >

Cc: Sam Lessin <<u>sl@fb.com</u>>, Justin Osofsky <<u>josofsky@fb.com</u>>, Chad Heaton <<u>chadh@fb.com</u>>, Matt

Wyndowe <mw@fb.com>, Deborah Liu <debliu@fb.com>, Jon Eide <joneide@fb.com>

Subject: Re: Platform Market Estimates: Write-API v0

completely agree on the enabling competitors -- we aren't making any money -- and worst we are helping others make money at our expense. would be great to call out.

of engs for dev program: 5 was my gut below, but that was inclusive of the DIP since I think that this is mostly the same work with just a higher SLA. This is in the weeds anyway, so 5 and 3 (charles pushback if you disagree).

On Sep 3, 2012, at 9:37 PM, Mike Vernal < vernal@fb.com > wrote:

This is great, thanks for putting it together.

Slide 3: I think the "we are enabling competitors" might be too subtle. The real issue here is this -- we don't have a set of rules where we are really comfortable with folks like Path, Pinterest, and others integrating with us.

One of the things we've talked about is a principle of reciprocity. I'm actually pretty excited about that model -- I really think it's the best model we've found for how we'd work with Path, Pinterest, etc. -- we'll let them access some of our data, as long as they provide endpoints that let us access + import their data, too. This reciprocity model is also the equilibrium we found in the Contact Importer sphere (Microsoft + Y! shut us down until we agreed to reciprocal access, then did work to let them make API calls against us).

I'd love to somehow frame up in this deck that (a) we allow competitors to leach info out of the graph today, which makes us uncomfortable, and (b) our solution is a combination of restricting what data you can read and requiring reciprocity (key developers have to expose APIs/access to their data so we can import it).

At the very least I'd like to have a conversation about this because I think the "enabling competitors" is one of the two biggest issues (the other is monetization) and it's a little buried right now.

Slide 4:

Annual Developer Program - one of the things we don't really price into this model is a question as to whether we need to raise our service levels to credibly charge for our platform. E.g., I think we put developers through a lot of shit today, but it's somewhat defensible that it's a "free platform" (even though people are building multi-\$100M businesses on it). I do wonder if we are being unrealistic about not needing to staff up more eng to service what we have. (This is what I thought the 10 Eng represented, and thought it was a savvy point - but I guess I just extrapolated.) Certainly I think you need some ratio of "dev support engineers" to SWEs to have the SWEs servicing the issues the others are raising, so its impractical to assume that we can scale one without scaling the other. Unless someone has a different feeling here, I'd probably put this at 5 Eng (SWEs) and keep the note about them being for support/QA.

Device Integration Partners - same point. If we make the ADP # 5, then I'd keep this at 3.

Premium API features - the disconnect between \$3 (20130 and \$140 (18mo RR) is really strange. Are we using the same assumptions for those two numbers?

Slide 7: I think it's worth calling out that this is proposing a huge departure from our current model (removing access to friend data), so it's worth calling out why, the risks involved, and being clear this is a point for discussion.

Slide 9: Can we re-add the revenue, maybe in parentheses, after each of the channels? Want to emphasize the point that Neko dominates, so we can talk about whether we should just focus on Neko vs. pursuing all these opportunities.

Lastly, just FYI - the Insights team is pivoting towards custom app analytics to help support Neko. Talking to Greg S., I think the killer scenario he sees is:

- Apps incorporate our SDKs, get anonymous logging w/ demographics for free
- Regardless of whether the user logs in, app can log events like "user purchase \$5" with us
- We can store that edge in a structured way and then let developers eventually tell us to optimize installs for user spend

I think of this as part of the Neko opportunity (why I put 10 engineers against it), but since you mention it in the last slide want to call out that we're already starting work on this.

From: Sam Lessin <<u>sl@fb.com</u>>

Date: Mon, 3 Sep 2012 17:00:40 -0400

To: Justin Osofsky <<u>josofsky@fb.com</u>>, Douglas Purdy <<u>dmp@fb.com</u>>, Chad Heaton <<u>chadh@fb.com</u>>

Cc: Charles Jolley <<u>charlesj@fb.com</u>>, Mike Vernal <<u>vernal@fb.com</u>>, Matt Wyndowe <<u>mw@fb.com</u>>, Deborah

Liu <<u>debliu@fb.com</u>>, Jon Eide <<u>joneide@fb.com</u>> **Subject:** Re: Platform Market Estimates: Write-API v0

Responding to in a few places

Primarily for Doug + Charles

- on # of headcount for annual developer fee headcount set to 1 now
- on # of headcount for annual developer fee revenue # just let me know what you want slotted in
- on API usage fees just tell me what # you want to slot in and support for tomorrow

Primarily for Deb (but everyone also)

- I am looking at the Neko run-rate at 18 months, why is it not that much bigger than 2013... seems like 260 is low perhaps?

Primarily for Justin

- agree on resources / we are only going to show E&D
- slide 2 updated
- slide 3 updated
- slide 8, I said 'on the order of' for just that reason -- \$140 seems a little overly precise for me... but changed nonetheless
- slide 9, changed to \$300-\$400 here, again, I worry about precision
- slide 10, fair but I am going to leave it

Attached is current, keep the revs coming!

S

From: Justin Osofsky <josofsky@fb.com>
Date: Monday, September 3, 2012 1:14 PM

To: Douglas Purdy <<u>dmp@fb.com</u>>, Chad Heaton <<u>chadh@fb.com</u>>

Cc: Charles Jolley <<u>charlesj@fb.com</u>>, Sam Lessin <<u>sl@fb.com</u>>, Mike Vernal <<u>vernal@fb.com</u>>, Matt Wyndowe <<u>mw@fb.com</u>>, Deborah Liu <<u>debliu@fb.com</u>>, Jon Eide <<u>joneide@fb.com</u>>

Subject: Re: Platform Market Estimates: Write-API v0

Overall, this is really good. A few thoughts:

- Resources. I agree that we should only specify eng/design resources to be consistent with how other groups are approaching the exercise.
- Slide 2. I might add a second bullet under the "value to developers" column/"data" row. It feels like the
 reason a lot of developers integrate with platform is to "capture user data for future monetization potential"
 (or something like that). This type of developer asks for many GDP permissions with no real intention of
 personalizing the experience.
- Slide 3. Similarly, an additional problem on the "data" row is that we "undermine user trust" by creating a dynamic where users give away a lot of data without getting any pay off in return.
- Slide 5. There is a typo in the 4th dash under the 1st bullet (it should read "we provide" rather than "provides"). Also, I wonder if it might be clearer if it reads "we provide a small number of official...".
- Slide 8. The "ramping to ~\$100M" seems inconsistent with slide 4 which has the 18-month run rate opportunity at \$140M.
- Slide 9. The \$350-400M opportunity seems inconsistent with slide 4 which has the 2013 opportunity at \$321M (sum of the 2013 revenue for write APIs) and 18-month run rate opportunity at \$463M (sum of the 18-month run rate revenue).
- Slide 10. The "launch ad network on mobile" bullet seemed like a somehat new concept based on the previous slides (the other bullets summarized previous discussion points). However, it feels ok because a lot of the subsequent slides begin to extend into new discussion areas as well.

From: Douglas Purdy <dmp@fb.com>
Date: Mon, 3 Sep 2012 12:23:18 -0700
To: Chad Heaton <chadh@fb.com>

Cc: Charles Jolley <<u>charlesj@fb.com</u>>, Justin Osofsky <<u>josofsky@fb.com</u>>, Sam Lessin <<u>sl@fb.com</u>>, Mike Vernal <<u>vernal@fb.com</u>>, Matt Wyndowe <<u>mw@fb.com</u>>, Deborah Liu <<u>debliu@fb.com</u>>, Jon Eide <<u>joneide@fb.com</u>> **Subject:** Re: Platform Market Estimates: Write-API v0

ok, lets change that column to 1. sam?

are there other columns with non-eng/pm in there?

On Sep 3, 2012, at 12:06 PM, Chad Heaton < chadh@fb.com wrote:

For consistency w/ the other teams, we should just focus on Technical resources here (Eng/ PM / Designers). If we want to estimate XFN hiring needs to support as a separate exercise for our own benefit, we can definitely do that. But I just want to make sure that we're apples-to-apples w/ the other groups on the resources side.

From: Douglas Purdy < dmp@fb.com>

Date: Monday, September 3, 2012 11:35 AM

To: Charles Jolley <charlesj@fb.com>, Justin Osofsky <josofsky@fb.com>, Sam Lessin <sl@fb.com>

<<u>debliu@fb.com</u>>, Jon Eide <<u>joneide@fb.com</u>>

Subject: Re: Platform Market Estimates: Write-API v0

justin: are we covering your asks part of this exercise? if so, i think we should create another column to make sure everyone is clear.

charles: can you respond to the other thread here:

1: my understanding is that we made two changes in the assumptions: a 50% drop-off and only including /user API calls. I think the dropoff is fine, but I need to understand the latter better to have an opinion, particularly if it includes /page calls, etc. As it stands \$10 seems low to me.

2. My assumptions were straightforward: number of apps created last year * \$100. There will clearly be some drop off here. Perhaps we decided to charge by Dev not app?

On Sep 3, 2012, at 10:38 AM, Charles Jolley <<u>charlesj@fb.com</u>> wrote:

Re #2: the 10 ask includes 1 end + 9 for ops/dev support since there was no separate column for that. These would belong to Justin's team - we can adjust if Justin wants to.

Re #3: Most recent deck attached.

--

Charles Jolley

Facebook, Inc.

On Monday, September 3, 2012 at 10:21 AM, Sam Lessin wrote:

Cool...

re: 1 — whatever Mike/Vlad thinks is right —

re: 3 — that makes my day:)

S

From: Douglas Purdy < dmp@fb.com>

Date: Monday, September 3, 2012 10:11 AM

To: Sam Lessin <<u>sl@fb.com</u>>, Charles Jolley <<u>charlesj@fb.com</u>>

Cc: Mike Vernal < vernal@fb.com >, Matt Wyndowe < mw@fb.com >, Justin Osofsky

<josofsky@fb.com>, Chad Heaton <chadh@fb.com>, Deborah Liu <debliu@fb.com>, Jon Eide

<joneide@fb.com>

Subject: Re: Platform Market Estimates: Write-API v0

- 1. Great deck.
- 2. I am surprised by the ask for 10 eng for the Dev program. We need eng work, but I suspect that this is less than premium services? 5 was my gut. Clearly Mike/Vlad call.
- 3. Last slide: we absolutely want to do the anonymous targeting of invites, stream.publish, etc. in the next rev of the SDK. In short, no more GDP or UIDs for a bunch scenarios. Charles can send you his deck on this.

On Sep 3, 2012, at 9:46 AM, "Sam Lessin" <<u>sl@fb.com</u>> wrote:

Here is the loop as it stands... again, any and all input would be welcome. The biggest things I see to resolve are that

- (1) for basic API usage fees in the matrix we were showing \$10, but I realize that in doug's slides from early last week he had \$160 that is obviously a big difference driven by two very different sets of assumptions that we need to resolve.
- (2) on the annual developer fee we also had a difference between showing \$7 in the matrix fro 18mo RR, vs. doug having \$17 I am less concerned about this one since it probably isn't answer changing... but we should have a single answer.

DOUG — on both of these I would normally say it would be great to get your final call; however, I also want to be sensitive to the fact you are on vacation, so just LMK if you want someone else to own final call on the resolution here of what is being presented.

ALL — thoughts on slides / suggested changes or updates would be gr8

Sam

From: Mike Vernal < vernal@fb.com >

Date: Sunday, September 2, 2012 11:21 PM

 $\label{to:mattwent} \textbf{To:} \ \ \ \, \textbf{Matt Wyndowe} < \underline{\textbf{mw@fb.com}} >, \ \ \, \textbf{Justin Osofsky} < \underline{\textbf{josofsky@fb.com}} >, \ \ \, \textbf{Chad Heaton} < \underline{\textbf{chadh@fb.com}} >, \ \ \, \textbf{Charles Jolley} < \underline{\textbf{charlesj@fb.com}} >, \ \ \, \textbf{Deborah Liu}$

<debliu@fb.com>, Sam Lessin <sl@fb.com>

Cc: Jon Eide < joneide@fb.com >, Douglas Purdy < dmp@fb.com >

Subject: Re: Platform Market Estimates: Write-API v0

I took a stab at adding platform-based eng + design resources to the doc, per Wyndowe's ask below. (FYI, Sam, to incorporate in your doc.)

Also, on the design front for Contextual Ads - I think 1 design resource would be enough. I don't know what 3 designers would do across those products.

From: Matt Wyndowe <<u>mw@fb.com</u>>
Date: Sun, 2 Sep 2012 01:18:59 -0400

<<u>debliu@fb.com</u>>, Sam Lessin <<u>sl@fb.com</u>>

Cc: Jon Eide < joneide@fb.com >, Douglas Purdy < dmp@fb.com >

Subject: Re: Platform Market Estimates: Write-API v0

Mike:

- The \$30 mil sponsored search is for <u>FB.com</u> search. The \$1 mil is for mobile search.
- Out of sponsored search today \$11k is games, 2k are apps, 2k are pages. By end of year as the market fully uses the product we assume about 5x that in run rate (~\$80k), but I'm assumed the same approximate breakdown. I didn't see a huge growth in sponsored Open Graph App searches on web, but I might be missing something. (Seems most OG apps aren't big APRU or SEM companies e.g. path, pinterest, WaPO, etc. Perhaps Spotify, TripAdvisor, etc. and some others would be spenders, but likely eclipsed by games.) Let me know if you see some opportunity that I missed here.

Chad: Paid Messaging for FB is charging a user to directly message another user (like LinkedIn). Paid Messaging API is charging an app to directly message a user.

Justin: I'm happy doing any multiplier on the estimate. This is actually the part of the analysis I'm very unsure of, as we haven't yet had any engineers weigh in. **Mike Vernal** – can you give this a sanity check?

From: Justin Osofsky <josofsky@fb.com>
Date: Sat, 1 Sep 2012 11:06:12 -0700

To: Mike Vernal vernal@fb.com>, Chad Heaton chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:chadle:cha

<debliu@fb.com>, Sam Lessin <sl@fb.com>

Cc: Jon Eide < joneide@fb.com >, Douglas Purdy < dmp@fb.com >

Subject: Re: Platform Market Estimates: Write-API v0

Matt, regarding the eng/design resource estimates, Sheryl really pushed the ads team to increase their initial estimates to ensure that we have sufficient resources to ship things on time. Her perspective is that we historically underresource projects, and that teams should ask for more resources up front to ensure that we make the right trade-offs across projects. As a result, the initial FTE estimates for the ads team were often doubled or tripled after discussion in the room.

I think it will be important to use a similar approach in pulling together the estimates for platform to ensure that we do an accurate comparison across the potential opportunities.

From: Mike Vernal < vernal@fb.com > Date: Sat, 1 Sep 2012 10:12:02 -0700

To: Chad Heaton <<u>chadh@fb.com</u>>, Matt Wyndowe <<u>mw@fb.com</u>>, Charles Jolley <<u>charlesj@fb.com</u>>, Deborah Liu <<u>debliu@fb.com</u>>, Sam Lessin <<u>sl@fb.com</u>>

Cc: Jon Eide <<u>joneide@fb.com</u>>, Douglas Purdy <<u>dmp@fb.com</u>>, Justin Osofsky <<u>josofsky@fb.com</u>>

Subject: Re: Platform Market Estimates: Write-API v0

Matt - thanks for pulling this together; this is awesome and really helps put in perspective of the scope of these opportunities (e.g., in particular, it makes clear

that Neko dominates these other channels and so tees up a healthy debate about investing more in Neko vs. premium-izing these channels).

A couple of questions:

- Sponsored search results in the #s you say \$30M, and then in the description you say that it's \$<1M/year. Can you help explain the difference? Is it that all the \$30M would come from canvas apps?
- More generally, it would be useful to understand for this projection, how much of this comes from Canvas apps vs. Open Graph apps (I.e., all non-Canvas apps). Sponsored search results / sponsored placement in app center are pure new opportunities, so understand that you might be counting both canvas and open graph apps in that.

Chad - re: paid messaging, I think Schrep is estimating out recruiting, dating, non-friend. I think messages from platform apps/developers to users is another scenario we've talked about. We should be estimating that opportunity (developer->user messaging), but not the broader one.

-mike

From: Chad Heaton < chadh@fb.com > Date: Sat, 1 Sep 2012 11:08:45 -0400

To: Matt Wyndowe <<u>mw@fb.com</u>>, Mike Vernal <<u>vernal@fb.com</u>>, Charles Jolley <<u>charlesj@fb.com</u>>, Deborah Liu <<u>debliu@fb.com</u>>, Sam Lessin <sl@fb.com>

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Subject: Re: Platform Market Estimates: Write-API v0

Matt -

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l added your numbers to the Zoho doc (https://docs.fb.com/opendoc.do?fileId=e7895BbLD61nf7i721I80z5ck0x78Fx6700kx 6700sx70s)

Couple of questions:

- Need to add the Current Eng/Designers for each of the projects as well as the number of each that would be needed to build/launch
- Re: Paid messaging, there's another team that's been working on a Paid Messaging section (Schrep & others are working on it). Theirs includes Recruiting Messaging, Dating Messaging, and Non-Friend Messaging. So would the differentiating element be that ours is Platform App Messaging? Just want to make sure we're not double covering the same oppty

From: Matt Wyndowe <mw@fb.com>

Date: Saturday, September 1, 2012 12:16 AM

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<<u>dmp@fb.com</u>>, Justin Osofsky <<u>josofsky@fb.com</u>> **Subject:** Platform Market Estimates: Write-API v0

Here is what we have so far.

Couple of notes (1) we are missing sponsored stories, as we still haven't tracked down ads estimate; (2) we tried to err on the side of being conservative with numbers, but they can change pretty drastically depending on assumptions. We think they give some general idea of the size. But feel free to push back / alter estimates with different assumptions.

Will resend once we get sponsored stories estimates, but know that Vernal asked for something today, so wanted to send what we had in all its rough glory. In the meantime feel free to ping with any q'ns/comments.

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Premium Write-API \$ Estimate Summary

Total 2013 50/50: \$271 million (doesn't yet include sponsored stories)

Total 18 month run-rate: \$350 million (doesn't include sponsored stories)

PM/Eng/Design Investment: 1 PM, 3 Eng for 6 months. (Need to double check with eng; we are largely doing most of this on the front/dev end, so mostly a matter of backend system / payments.)

Risks: A lot of this revolves around Apple/Goog allowing us to charge for push notifs, which they could disallow. Many of these (e.g. notifications/direct messaging) could have poor user experiences if too aggressive. Questionable how devs will respond if we limit free channels too much given free alternatives (address book, SMS, GameCenter, push notifs, etc.)

Detail:

Invitations (mobile)

- What: promoted invitations to pop a notification jewel, or buzz phone.
- 2013 50/50 rev: \$14 million- 18 month run-rate: \$28 million
- Logic
- -- Today we have 60m outbound invite clicks per month on mobile and we estimate about 6m installs (we don't have install data, but assume 10% install rate similar to Neko). Of these 6 million installs, we assume 10% of these would be paid/promoted for at \$1 cost per install. That's ~\$7m annual business today. For mobile growth we assumed 200% mobile growth next 18 months (based on analyst estimates). We also assumed a 200% increase in apps becoming more social and using inviting mechanic over next 18 months. Currently our canvas ecosystem has about 30 million invites per month (5x the mobile volume), so we felt there should be just as much need for invites on mobile once the ecosystem matures. We discounted 500% to 200% to account for there being other channels on mobile (Gamecenter, email, text, etc.). This gives us \$28 million 18 month run-rate. If you wanted to be more aggressive, you could assume a 300 or 400% increase in how social mobile games become.
- -- 2013 we brought down estimate that it would take time to really get devs to start paying learn how to adopt invites into the game, and at least Q1 until we started charging. (Note today we have trouble getting devs to use invites for free, as mobile devs aren't used to building social games. We only recently launched reasonable invites on mobile that devs are starting to use.)

Notifications / Paid Messaging

- What: Paid A2U notifications from apps you have already installed. Potentially showing up as a notification, push notif, pinned to feed, inbox message, etc. Charged per-click (re-engagement).
- 2013 50/50 rev: \$15 million
- 18 month run-rate: \$30 million
- Logic: Re-engagements are generally worth 0.25% of a new user (dev feedback), and we believe that there is potentially 8x the volume. (On canvas we generate 8m re-engagements / day vs installs of 1m / day; this could get bigger with A2U notifications.) So one could say that the opportunity should be roughly twice as big as invites. But phones have a pretty significant competitive (free) channel: push notifs. So we thought directionally this would be similar to invite opportunity.

Neko

- What: Mobile app installs
- 2013 50/50 rev: \$200M (just for reference, TapJoy was on \$150M run rate a few quarters ago)
- 18 month run-rate: \$260M
- Logic: this is from Deb's longer Neko analysis, which we won't rewrite here.

Sponsored Stories	
- 2013 revenue:	
- 18 month run-rate:	

- Trying to get numbers from sales team.

Sponsored Search Results

- 2013 revenue: \$30 million- 18 month run-rate: \$30 million
- Logic
- -- Canvas: Virtually all of sponsored search on canvas are platform apps (13k/15k). Esimate for eoy run-rate is around \$30million / year (sales team estimate).
- -- Mobile outbound for search is tiny (\sim 300k new apps are clicked on from search each month, which gives us an estimated 30k installs x \$1 per install x 10% paid = < \$1million / yr). So we don't think sponsored mobile search is going to be a significant opportunity worth modeling further.
- -- Growth: Assume no growth, as it's canvas.

Sponsored Placement in App Center

- 2013 revenue: \$18m - 18 month run-rate: \$18m
- Logic:
- -- Canvas: Well-placed apps in App Center (top of lists, across all categories) currently drive 6M install / month. Assume a top ad placement for each list at \$1 CPI, losing 75% click-through due to the fact that it's an ad. \$18 million / year.
- -- Mobile: Doesn't drive sufficient traffic to charge. Ansible may change that, which could double or triple the opportunity if successful.
- -- Growth: Assumes we can be up and running by Jan 2013 with a unit. Assume no growth, as it's canvas.

From: Mike Vernal < vernal@fb.com > Date: Thu, 30 Aug 2012 15:51:43 -0700

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Subject: Platform Market Estimates

Thanks for meeting / sorry for the randomization.

For each of the below areas, we're looking for the following stats:

- 2013 50/50 Revenue Estimate
- 18 Month Run Rate
- PM/Eng/Design Investment
- Any substantial risks to note (e.g., "Apple could shut this whole thing down.")

Charles:

- Annual Dev Fee
- Device Integration Partners
- API Usage Charing (revenue, efficiency savings, and savings from removing friends.* APIs)
- Premium Read APIs
- Coefficient
- SI
- User-to-user path

Matt:

- Premium Write APIs
- Invitations
- Notifications(?)
- Apps You May Like (Neko)
- Sponsored Stories
- Paid Messaging
- Sponsored placement in App Center
- Sponsored search results

Deb:

- Contextual ads on FB
- Contextual ads on third-party sites

Sam/Boland:

- CRM / Ad Targeting Scenario
- Third-party data exchange

Can you just reply to this thread w/ this data?

Thanks - sorry for the rush. <OG as a business v2.pptx>

<EndToEnd - 2012-08-30.pdf>

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