From: Sheryl Sandberg </O=THEFACEBOOK/OU=FIRST ADMINISTRATIVE GROUP/CN=RECIPIENTS/CN=SHERLS>
Sent: Monday, November 19, 2012 1:16 PM
To: Mark Zuckerberg; Sam Lessin; Mike Vernal; Douglas Purdy; Javier Olivan; Alex Schultz; Ed Baker; Chris Cox; Mike Schroepfer; Dan Rose; Chris Daniels; David Ebersman; Vladimir Fedorov; Cory Ondrejka; Greg Badros
Subject: RE: Platform Model Thoughts

I think the observation that we are trying to maximize sharing on facebook, not just sharing in the world, is a critical one. I like full reciprocity and this is the heart of why.

From: Mark Zuckerberg
Sent: Monday, November 19, 2012 2:54 AM
To: Sam Lessin; Mike Vernal; Douglas Purdy; Javier Olivan; Alex Schultz; Ed Baker; Chris Cox; Mike Schroepfer; Dan Rose; Chris Daniels; Sheryl Sandberg; David Ebersman; Vladimir Fedorov; Cory Ondrejka; Greg Badros
Subject: Platform Model Thoughts

After thinking about platform business model for a long time, I wanted to send out a note explaining where I'm leaning on this. This isn't final and we'll have a chance to discuss this in person before we decide this for sure, but since this is complex, I wanted to write out my thoughts. This is long, but hopefully helpful.

The quick summary is that I think we should go with full reciprocity and access to app friends for no charge. Full reciprocity means that apps are required to give any user who connects to FB a prominent option to share all of their social content within that service (ie all content that is visible to more than a few people, but excluding 1:1 or small group messages) back to Facebook. In addition to this, in the future, I also think we should develop a premium service for things like instant personalization and coefficient, but that can be separate from this next release of platform. A lot more details and context below.

First, to answer the question of what we should do, the very first question I developed an opinion on was what we should be optimizing for. There's a clear tension between platform ubiquity and charging, so it's important to first fully explore what we're trying to get out of platform.

The answer I came to is that we're trying to enable people to share everything they want, and to do it on Facebook. Sometimes the best way to enable people to share something is to have a developer build a special purpose app or network for that type of content and to make that app social by having Facebook plug into it. However, that may be good for the world but it's not good for us unless people also share back to Facebook and that content increases the value of our network. So ultimately, I think the purpose of platform -- even the read side -- is to increase sharing back into Facebook.

If we do this well, we should be able to unlock much more sharing in the world and on Facebook through a constellation of apps than we could ever build experiences for ourselves. We should be able to solve the audience problem partially by giving people different audiences in different apps and

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linking them all together on Facebook. The current state of the world supports that more social apps enables sharing, so the biggest challenge for us is to link them all together.

This makes it somewhat clearer that we want platform to be ubiquitous and to strongly encourage sharing back to Facebook, but it's not yet definitively clear that having full reciprocity and no charge is optimal.

For one thing, it's conceivable that we'd get more net sharing overall and more net sharing into Facebook if we didn't have a reciprocity mandate. This would be true if many developers dropped out over the reciprocity mandate. The reason I don't think they will is that almost no developers will even be giving us the majority of their data since many of their users won't log in with Facebook and many of those who do won't choose to share it back to Facebook. Assuming for a heavily FB-dependent app each of those is 50% participation, then only 25% of the data is shared to Facebook. As long as apps always have a sustainable advantage over Facebook, most will participate. For more sensitive companies like Amazon and Yelp that value their reviews a lot more, way fewer than 50% of their users will connect to Facebook, so this will represent a tiny portion of their reviews and social data. My guess is that they should still rationally want to connect with Facebook at these levels, but if they don't then that probably means they're competitive with us and we're better off not letting them integrate with us anyway. This all makes me think full reciprocity is the way to go.

For charging, the question is whether we could charge and still achieve ubiquity. Theoretically, if we could do that, it would be better to get ubiquity and get paid. My sense is there may be some price we could charge that wouldn't interfere with ubiquity, but this price wouldn't be enough to make us real money. Conversely, we could probably make real money if we were willing to sacrifice ubiquity, but that doesn't seem like the right trade here. After looking at all the numbers for a while, I'm coming around to the perspective that the write side of platform is a much bigger opportunity for us and we should focus the vast majority of our monetization effort on that and not this.

The last question is whether we should include app friends (ie the user's friends who are also using this app). Ultimately, it seems like this data is what developers want most and if we pulled this out of the package then most of the value proposition falls apart. This is especially true if we require full reciprocity without offering our most valuable data.

So that's essentially how I got to thinking we should do full reciprocity with app friends and no charge.

There's some more nuance to this opinion though:

First, in any model, I'm assuming we enforce our policies against competitors much more strongly. The good news about full reciprocity is that for bigger social companies we might otherwise be worried about, if they're enabling their users to push all of their social content back into Facebook then we're probably fine with them. However, for folks like WeChat, we need to enforce a lot sooner.

Second, if we're limiting friends to app friends, we need to make sure we build the appropriate distribution tools that developers want to invite the rest of the user's friends. We keep saying that theoretically this is part of the write side platform and it's a premium feature, and those things may be true, but I think we need to build them and make sure they're ready when we roll this out or else we're just taking away functionality without replacing it with something better. It seems like we need some

way to fast app switch to the FB app to show a dialog on our side that lets you select which of your friends you want to invite to an app. We need to make sure this experience actually is possible to build and make as good as we want, especially on iOS where we're more constrained. We also need to figure out how we're going to charge for it. I want to make sure this is explicitly tied to pulling non-app friends out of friends.get.

Third, there's the data that suggests that if we share app friends only, then most apps will only get fewer than 10 friends from each person. If this is the case, then we may want to consider including coefficient ranking for those app friends for free -- or at least the top 5-10 app friends. This doesn't seem like much leakage and could encourage more people to use our tools by differentiation our product further from anything else that's out there.

Fourth, for products like Ansible and Newsstand, it will be very important to enable people to import their feeds of content from other apps into Facebook. That is, we'd be pulling those people's friends' data from those apps -- eg your friends' pins on Pinterest to make a Pinterest section for you in Newsstand or include the pin images on your Ansible lock/home. Since this is going to be an important upcoming push, we need to consider whether it's still the right thing to remove our own stream.get API if we're requiring full reciprocity. I still want to remove it, but if the spirit is full reciprocity, it may just be difficult to refuse access to the app that are pushing streams into us. The good news is that those services aren't the ones we're typically worried about, so we'd still get to prevent almost all troublesome apps from having it. The bad news is this would prevent us from really deprecating this. I haven't thought through this fully and need to think about it some more.

Fifth, not charging still means people will overuse and abuse our APIs and waste money for us, so I still think we should implement some kind of program where you have to pay if you use too many of our resources. That said, the goal of this won't be to charge for actual usage so we can build a less precise system of for monitoring than the full accounting systems we would have had to have built for the other system we discussed. What I'm assuming we'll do here is have a few basic thresholds of API usage and once you pass a threshold you either need to pay us some fixed amount to get to the next threshold or you get rate limited at the lower threshold. One basic implementation of this could be to have a few different fees for developers, with basic starting at $100 and then having levels at $10k, $1m, $10m, etc. This should be relatively simple, achieve the goal of controlling costs and make us some money if we want.

Finally, I want to discuss the premium read services for a bit.

One of the big ideas I took away from our discussions was Ed Baker's framing that every business wants growth, engagement and monetization. I like this framing because it explains what the read side of platform is -- it increases engagement, or more specifically, it takes a user and turns them into a more engaged user through adding real identity and social connections to them. This is real value and it's different from anything else we do. We have ads and some organic distribution for driving growth, the read side of platform for driving engagement and the ad network and payments for driving monetization. We'll offer the full stack of services.

How our premium read services add value is pretty clear -- through simply eliminating friction. Our free services let you get basic info, app friends and let you pay to get access to a dialog to invite more friends. Developers can always get these critical flows to perform better if they have more of the data

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and more control though. Through instant personalization, they can encourage a person to sign in more effectively and will therefore convert more unregistered users to ones with real identity and friends. Through coefficient and full friends list, they can upsell a person to invite their friends much more effectively throughout their app as well. I'd estimate that these two things alone would increase conversion by ~20-30% for developers. That means they should be willing to pay us roughly 20-30% of the value of each user who signs up. That's a big deal because engagement is very valuable.

I have a specific proposal for how to get started with this and it's that we should work with mobile games. The feedback we're getting from almost every other type of developer is they don't know how to value our services or really much of their engagement at all. But game developers generally track this and have a better sense. They would certainly be willing to try it out in new games and they'd be able to figure out how well it worked. Once it works for most game developers, then we can start letting other developers in as well.

Working with game developers has a few other nice properties. It means doing something nice for our game developers first and making them feel valued. It's fairly natural to offer IP on mobile since we already offer it to them on canvas. This could also be an important part of helping us transition our canvas business onto mobile if it effectively lets us take a 20-30% cut of the value of FB-connected users.

On pricing, there are a couple of ways I could see this working. First, we could charge based on the value our ads auction computes for each user. I'm still fairly confident that's the most efficient way to charge if we can't just take a straight rev share. That said, the second choice, since this is just games, is to actually figure out how to just take a straight revenue share. This might be possible in conjunction with some sort of publisher model for games that I know the team is already thinking about.

This all said, while I'd love to build this premium engagement model as quickly as possible, there's definitely more low hanging fruit on the growth/distribution side that almost all developers will be able to use if we build out correctly. So we should probably prioritize that before premium engagement.

We also need to first prioritize all the tools required to make these policies work, including making it so developers can actually share everything social in their apps back to Facebook if we're requiring them to offer that option, the premium invite channel that will replace access to non-app friends, etc.

Overall, I feel good about this direction. The purpose of platform is to tie the universe of all the social apps together so we can enable a lot more sharing and still remain the central social hub. I think this finds the right balance between ubiquity, reciprocity and profit.

Again, this isn't final but I wanted to let you all know where I'm leaning. I'm looking forward to discussing when I'm back after Thanksgiving.

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EXHIBIT 49

UNREDACTED VERSION OF DOCUMENT SOUGHT TO BE LODGED UNDER SEAL