Reflections state of the economy – Part 2

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01-05-2008

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Further discussion – Jita, contracts and market mechanics

Abstract

This is the second part of my reflections on the state of the economy. My first part was posted on the forums just a few weeks ago, and was very well received by the community. Therefore, I wrote this second part where I go in depth with a few topics and try to raise awareness of a few issues. It's my goal to achieve this raised state of awareness in the community by explaining certain concepts and facts in regards to real life laws of a network, as well as explaining certain barriers and limitations we see in regards to the eve cluster as a whole as well as the mechanics that are enforced upon us.

The first part was quite extensive in regards to the topics covered, and I realised that I didn't manage to a high enough degree to actually point out the issues enough as to why people should care. I was faced with the fact that some people just didn't really care about the economics as long as they could fly their ships, and the cheaper they were, the better.

I fully understand that some people aren't interested in what is inevitably a fairly complex structure, if you want to be serious about it. And that is in fact where the issue lies to a degree. Eve is a game and is supposed to be fun. People will do things in game that they wouldn't do out of game.

For instance, the classic argument about whatever minerals you mine and refine yourself is free or not. This means that people who work solely towards making a profit has to compete against people who can undercut their products to such an extreme line that those who sets certain standards and procedures for their business, just can't compete. So this is an example of where the real issue doesn't lie with the mechanics of eve, but solely the players. But we still can't avoid the fact that we are seeing certain issues in regards to current mechanics due to the product of scale.

The main area of discussions will be in regards to market mechanics in several ways, including but not limited to Jita, contracts and market orders. It will consider the product of scale as the main cause of the eventual issues we are seeing, and we will look into how things can scale better.

It's my intention to write a third part covering mainly consumption patterns and the issues in regards to these, or the lack of it.

It's my assumption as you read this part of the discussion, that you already have read my first part which gives you the general idea. Else I'd encourage you to go here and read the first part.

This time I will also encourage you to contact me with questions, ideas or feedback. I appreciate all feedback very much and ill love you discuss a topic with you. My email and messenger details can be found on my CSM campaign website, or you can evemail or convo me in game.

I - Introduction and problem space

At present, we are seeing a few things happen. First of all, the market is becoming slightly static. Frankly, the trit cap was recently removed(Albeit unsuccessfully, they tried), which is one of the first steps in order to have a dynamic market.

But as I expressed in the first iteration of this series of discussions, I feel that the market is slowly heading towards a crash-ish situation. As the whole system scales, the individual can't make a difference. Things start to become jobs rather than fun, and the individual is largely useless.

This is not the only problem with scale. It also causes lag.

So the main problem at present is how market mechanics works fundamentally, how to decrease the lag effect from market hubs, as well as make the game more dynamic and how to combat scale.

II - Explanations

II.A – Jita and why it lags

Jita has been a very hot topic for a long time. Countless of threads pop up every day suggesting to remove Jita completely, not allow people to trade there, etc. Etc.

But the fact is that it all comes down to the cluster which runs eve. All these information's which will be presented here is based on previous statements from developers as well as presentations from fanfest.

The cluster software is made to a large degree using stackless python. Stackless python allows you to write concurrent software on just 1 core(A blade in the cluster has several cores). At present, nodes are connected with an Ethernet connection, due to the fact that cluster was designed many years ago. At that point in time, infiniband wasn't common, neither was high-performance computing.

But the problem we face now is that 1 core can't handle to load of a system. A system contains different services, including the market, space itself, items and ships, etc.
All these things takes up CPU time, and they can't be separated across nodes, because of the high cost there is with talking on an Ethernet connection.

But CCP is reworking the network stack of the cluster, and is looking to implement Infiniband this year.
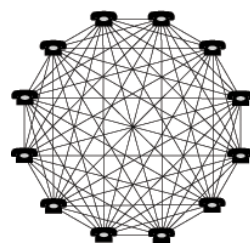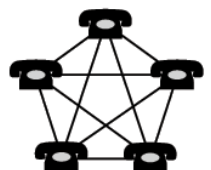
II.B – Metcalfe's law and applying it to Jita

This lag in Jita, while the problem is the cluster, the thing that causes the server to lag, is the network effect.

The network effect, also known as Metcalfe's law, is the theory of how the value of a network is equal to n^2, where n is the amount of users on a network. The law was put forward by Robert Metcalfe, the founder of 3Com.

In simple terms, it means that the more users there is in a system, the more its value is. And since users attract users, we see an exponential factor. Be it pvp(People wants to shoot people, they thus go where there is people) or the market(People want to sell to the biggest amount of people, or have the widest range of things to buy for their ships).

II.C – Undercutting and market mechanics

At present, the market to an EXTREMELY high degree encourages competition. While this isn't inherently bad, the large scale of eve amplifies the effect of competition, which can then easily crash a market.

When you put up an order, or change it, a 5 minute timer starts. Inside this time, you can't change your order. But once the 5 minutes are up, you can change the order, without paying a fee. This means that people can rapidly undercut. There is also no limit on how much you can change your order with; there is nothing that stops people from undercutting by 0.01 isk.

II.D – Why contracts isn't being used to its full potential

Contracts to me, is an extremely powerful tool. If CCP provided us tools to use it properly, instead of limiting us, it would be fantastic.

At present, we are seeing CCP artificially limiting the use of contracts by:

- Limiting the amount of space a courier contract can hold
- Limiting the time a contract can be active(This is bad, since contract items by definition have a higher turnaround time)
- You can't accept item exchanges across regions
- No options for things like shares
- Future contracts isn't an option

These are all limiting factors, to what could become an extremely interesting way of dealing with people.

III – How to combat scale

This will largely be some of the same points I put forward in my first article, but I will revise what I said

Applying Reed's law

David Reed, the man behind the User Datagram Protocol(UPD) and contributor to the TCP/IP protocol, takes Metcalfe's law to the next level.

The idea is that Metcalfe's law can't scale in a sensible way. Because of this, a new law was made, which described groups(Mini-networks connected to a large network). This theory has later been used to describe social networks, like facebook and myspace, and how they interact with each other.

Because reed's law($2^n - n - 1$) has the potential of scaling exponentially, this is the ideal solution, now that our main network(Be it Jita or a 0.0 system, where there is PvP going on) can't scale further. It also allows scaling much more rapidly.

The law can be applied in a few days. First of all, the issue I'm most interested in is Jita.

The idea, that has been put forward, is to make NPC couriers, who can deliver things from Jita, into the surrounding system. This makes people able to interact with the Jita, but not having to enter Jita, thus reducing lag.

The way to visualise this idea, is that under Metcalfe's law, there is 1 network. This network consists of nodes(players). These are what attract more people.

But with Reed's law we see that a network can consist of more systems(sub-groups), which contains nodes.

So while this maybe isn't a sustainable idea over time, it WILL make a difference, while our network can't scale beyond the power of the cores(Or we can scale in cores attached to 1 system).

This doesn't only apply to the market. The very same idea can be applied to PvP. I encourage you to read up on some of the discussion Jade Constantine put forwards in his CSM campaign about sovereignty and the control of gates(Moving a network from being a system of moons, to being the control of gates, this creating sub-groups where control is placed) instead of POS warfare.

Moving away from the current market paradigm

This is, at present, not a viable idea. But I think as we move forward, and the world of eve becomes more complex, this will be a very appealing idea. But it can't stand alone. It has to go hand in hand with variation of goods and a change in consumption patterns.

But as I put forward in my first essay, the way we buy things now, should change. At present, we buy the cheapest thing on the market, and everybody buy the same thing.

The idea is to remove the "free" trading market, as it is now, and put in store-front like ideas, possibly trough contracts, which allows people to list what kind of things they sell, and allow people to buy from specific corporations. The thing that should be promoted is the corporations, and how they interact with the community. Not only that, but people should not just go and buy stuff, they should look for the best deals, there should a bonus by doing this. This goes hand in hand with the variation of goods that not everybody builds the same ravens, but there are flavours.

This is an extremely complex thing to implement, and before we see a change in the consumption patterns and the variation of goods, this idea would be destructive to implement. And as such, it is hard to get across in a monolog, and as such I suggest we discuss it on the forums.

IV – Conclusion

This time I intentionally kept the size of this discussion inside 10 pages. But I hope that i got the message across.

The idea is to:

- Promote corporations and they work they do, make a good corporation name matter.
- Variation in the market by giving people OPTIONS, options in regards to who they want to buy from, what kind of variation of an item they want and making people able to make a difference.
- Create more dynamic in the market, as well as PvP.
- Giving players the ability to MAKE A DIFFERENCE.

Everybody knows the feeling of not being able to make a difference. THAT is what this will help the most; it will give the players the ability to make a difference in the sandbox. That is the thing I want changed in eve. And that will be more viable, if these ideas are pushed forward.

Thanks for reading. Please post your thoughts, and bring more ideas to the table. The things I have put forward is a framework for how to change eve, and is NOT to be implemented as-is, but should be considered as the building stones for how to change eve to the better.