Är det ett problem?

# Fråga: är det ett problem att man inte kan utvärdera gameplay utan att lägga stora resurser på nätverksimplementation?

# Forumen

Formuleringen på frågeställningen användare av diverse forum runt om på nätet ställer är kanske inte den direkta som vi använder oss av. Utan frågorna som användare oftast ställer är mer lågnivå, där de egentligen söker tips på hur man kan gå tillväga.

## 1.

Från användare ”Bryan Harrington”  
*”My question is, if I head into my project with no plan to add multiplayer support, is it easy to go backwards (it’s usually not) and add the necessary code to capture a multiplayer game?”*

Svaren  
Från användare ”Ricket”  
*”Design it for networking from the start, because you won’t be able to add it later”  
”The first time I tried to make a multiplayer game (I wasn't even trying to make a single player game!), I figured I would first get the game working and then add networking. Bad idea. I was left with a prototype of a really boring single player game and no clue how to transform that into a multiplayer game”*

Från användare ”Leftium” som hänvisar till [Zoidcom](http://www.zoidcom.com/docs/AppDesign.html)   
*”If your project is in the planning stage, it is advised to design the project for networking right fromthe start. Bolting on network code in a late state of the project will most likely either lead to massive refactoring”*

[*http://gamedev.stackexchange.com/questions/5011/multiplayer-implementation-can-i-implement-it-later-if-i-chose-to*](http://gamedev.stackexchange.com/questions/5011/multiplayer-implementation-can-i-implement-it-later-if-i-chose-to)

## 2.

Från användare ”Neffy”  
*”... we’re finally getting to the point where we need to start implementing multiplayer to get a feel of the game from a more well-rounded perspective. We don't necessarily want to implement multiplayer later in the build in case there are some game-breaking bugs but we're not entirely sure if its the best method to start multiplayer implementation from the very beginning... Any insight is welcome”*

Svaren  
Från användare ”KulestarUK”  
*” I think the safest answer here is more 'a little bit of both', depending on what kind of networking you guys are doing. If you're making use of peer-to-peer then more of the latter, i.e. implementing multiplayer later, isn't too bad. Otherwise, multiplayer is best considered and thought through first, as any central servers have some hefty efficiency problems to take into account.”*

Från användare ”Yukichu”  
*” I ended up creating a fully functional client for a bullet-hell MMO RPG Shooter on my own, with no networking/server.*

*Yay, perfectly fine single-player game.*

*Now I have to add the networking. There is SOOOOO much stuff that should have been server-side that I wrote for the client and so much I didn't even think about because I was all like, "Oh I'll just keep working on the client and wait for this other person for networking stuff."*

<http://forum.unity3d.com/threads/224400-Starting-With-Multiplayer-vs-Implementing-Multiplayer-Later>

## 3.

Från användare ”Pureferret”  
*”Do we need to completely rebuild or can we just adapt the existing code, for the game to work across a network?”  
”What are the advantages of a GWT based browser game, compared to a swing based client side game that updates to a server?”*

Svaren  
Från användaren ”Sean Middleditch”  
*”... adding networking to a game that wasn’t designed from the ground up for it is a very difficult task.”*

<http://gamedev.stackexchange.com/questions/34064/how-do-we-adapt-our-game-to-work-over-a-network>

## 4.

Från användare ”Maik Semder”  
*”How significant is the addition of multiplayer to a singleplayer game compared to starting with multiplayer in mind?”*

Svaren  
Från användare ”Philipp”  
*” There are software architecture patterns which make it quite easy to add multiplayer later. One is the Model-View-Controller pattern... To add networking or multi-controller support to a game built around MVC, you just need to add a new controller (network input / 2nd player controls) and a new view (network output / 2nd player screen).”*

<http://gamedev.stackexchange.com/questions/57914/how-significant-is-the-addition-of-multiplayer-to-a-singleplayer-game-compared-t>

## 5.

Från användare ”Dan Webster”  
*”What should I keep in mind when developing a game to be multiplayer?”  
”... Obviously I can’t be making multiplayer as I develop the game, I kind of have to make it and then hope it works once I add multiplayer”*

Svaren  
Från användare ”Andrew Russel”  
*” I think the basic answer here is to expect to "have to redevelop everything" when you add networking. Adding networking will touch almost every part of your game - both code and design.”*  
*” (Trying the opposite path - trying to account for networking without actually implementing it - is a gross violation of YAGNI.)”*

<http://gamedev.stackexchange.com/questions/34620/what-should-i-keep-in-mind-when-developing-a-game-to-be-multiplayer>

# Post mortem

## Frozen Synapse av Mode 7

” Ian made a conscious decision to start with the basics of the multiplayer game and work outwards, designing units and adding mechanics only when a solid base had been established: this process worked so well that we'll be adopting it again for our next game.”

” Single player design was attempted too early, and went down some very significant dead-ends before the decision was taken to completely postpone it until after the multiplayer was done.”

” It was disappointing not to be able to say yes to any of those wackier ideas in multiplayer!”

<http://www.gamasutra.com/view/feature/134984/postmortem_mode_7_games_frozen_.php?page=4>

*Kommentar*Spelet utvecklades med multiplayer explicit i åtanke och som egentliga main-feature, singleplayer var i stort sätt bortprioriterat. Det verkar som multiplayer begränsade lite men orsakade inga andra större problem.

## Splosion Man av Twisted Pixel

”What went wrong – 1. Networking”

”...which left only a short four months to implement our network layer and get the whole game synched up over the network.”

”many of the game's features weren't implemented until quite late causing network synching of these features to be pushed back even later.”

<http://www.gamasutra.com/view/feature/132593/postmortem_twisted_pixels_.php?page=4>

*Kommentar*De visste från början att de ville ha multiplayer i sitt spel, men hade inte tillräckligt med folk för att kunna utveckla nätverket i början. Det slutade med att nätverkesstödet var tvunget att tryckas in i slutet av projektet och blev därför inte fullgott.

## Swords & Soldiers av Ronimo Games

”Last but not least, making the multiplayer first made it possible to balance the game from the beginning of the project”

”... so tools were built to create some single player levels which explained the basics of the gameplay.”

” As explained earlier, we decided at the start of the project to only build a multiplayer experience”

<http://www.gamasutra.com/view/feature/132618/postmortem_ronimo_games_swords__.php?page=3>

*Kommentar*Också utvecklat med multiplayer som en main-feature, för att sedan, när den delen var klar, implementera en singleplayer campaign

## Brütal Legend av Double Fine

”We started development by focusing first on the multiplayer mode of the game -- our thinking was that since we'd never made a multiplayer game before, figuring that out would be our top priority. It took 16 months to do so.”

*Kommentar*Även om spelet till stor del består av den öppna världen i singleplayer, så var det ändå multiplayer det fokuserades på först

## Diablo II av Blizzard

”... we would need to fundamentally change the game network. And, as we expected, this became one of our biggest challenges during development.”

## God of War: Ascension av Santa Monica

”The decision to add multiplayer.. forced us to reconsider how we made games”

”... some features, not least of which was multiplayer, required substantial rewrites that took longer than expected, and we couldn't deliver those mechanics until well after key deadlines.”

”Our entire player navigation code was something that we had to completely change to allow for online play”

”The Road to Multiplayer Was Longer than Expected”

”As anyone who's built one knows, building a multiplayer game along with single-player is like making two separate games.”

## Unreal Tournament av Epic Games

”After the original Unreal was completed, Epic wanted to follow up the project with some sort of add-on pack. Unreal multiplayer code was very poor, so the team felt that an expansion that improved multiplayer would be ideal. As feature lists grew and patches to Unreal were released, the add-on turned into a complete and independent game.”

## Trine av Frozenbyte

”As layers and layers of new code have been added to the engine, the cost estimate of adding online multiplayer has always increased with each project, and it became very hard to justify the additional cost of rewriting the game engine -- or rather, getting enough money to complete both the rewrite and whatever game we had in production.”

# Mail

Hej, vi heter Emil Lindau och Rickard Hansson och studerar programmet Utvecklare av digitala tjänster vid Linnéuniversitetet i Kalmar. Vi har under vår tid som studenter hela tiden lutat åt spelprogrammering och har vid varje givet fritt tillfälle försökt göra något inom det området. Egna spel, ett gemensamt spel, tile-editorer och dylikt.

Vi har nu kommit fram till vårat examensarbete och då givetvis fortsatt inom samma utstakade stig. Tillsammans med våra handledare har vi försökt formulera ett problem och frågeställning som vi vore oerhört tacksamma ifall ni, kortfattat, vill eller kan svara på.

Frågeställningen ser ut som följer (sammanfattad och generaliserad): ”Är det ett problem att man inte kan utvärdera gameplay utan att lägga stora resurser på nätverksimplementation?” Det vill säga, bromsar den parallella utvecklingen av multiplayer det agila i ett projekt och ställer det för höga krav på utvecklaren av ”gameplay” att samtidigt kunna och givetvis vara medveten om nätverksdelen?

Vill samtidigt poängtera att vi fortfarande är i fasen där vi försöker se och höra oss för om det ens är ett problem, eftersom vi utgår från egna erfarenheter och förväntar oss därför inget utförligt svar.

Tack för er tid!  
Mvh,  
Emil och Rickard

Skickat till:  
<http://arrowheadgamestudios.com/contact/>   
<https://mojang.com/notch/>   
<http://www.starbreeze.com/contact/>   
<http://www.fatshark.se/contact/>   
<http://imageform.se/contact/>   
<http://www.avalanchestudios.se/eng/contact-form/>