

On the way to good

GAME DESIGN

About me



Andrii Dotsenko Game Designer at Ubisoft Kiev

11 years in game design Far Cry 4, Far Cry: Primal





From theory to practice

We love to talk about design theory

There are many design talks about system design, UX, narrative, or new monetization methods. But we often missed the path from design to implementation when you as a designer have to interact with other people in order to implement your ideas.

But you need others to **execute** your ideas

Why these games are better?





ChryCon ParyStation DRAKETS DEGEPTION DRAKETS DEG







What's so special about them?







Different genres

Different platforms

Different audience and market

One similarity: quality of experience

What is the key?









6/80

Collective Genius



LINDA A. HILL, GREG BRANDEAU Emily truelove & Kent Lineback

It's not just about talent

There are some very successful innovative companies (systemically successful, like Pixar). And again, the key is always production culture.

But about talent in proper context

Successful innovation principles

Creative Abrasion

Ability to create a market of ideas through discussions. Diversity + Conflict.

8/80

Creative Agility

Ability to test and refine ideas through the discovery-driven learning process. Scientific Method + Artistic Process.

Creative Resolution

Ability to make decisions in a way that can combine different ideas and approaches to produce a new solution.

*TED talk: Linda Hill, 'How to manage for collective creativity'

Creative people must be stopped



Proper principles are not enough

9/80

There are many obstacles on the innovation's way. Society always acts like creative people must be stopped.

You should learn how to overcome **constraints**

*Coursera: Leading Strategic Innovation in Organizations



Design can be different

Perhaps, we can use these principles? Yes, our design and games are almost always new, but all "human factors" are very similar from project to project.

Can we learn how they work and then learn how we can overcome them?

But people are the same!

Game Design Framework



DESIGN PRINCIPLES

Stage 1



Everything seems right?





Something missed here. What is it?

It's all about player experience



... that comes from the interaction

14/80

It doesn't matter how good are your ideas, documents and code. The game appears only after the interaction.

The player experience is what we really sell

From experience to design



It all starts from the experience idea

Every game starts from the experience idea, from the core fantasy that you want to bring to the player.

You need to turn it into design

Macro Design

LEVELS	LOOK	TIME OF GAM/ WOOD	ALLY-BPC	ENEWY MODELS	MACRO GAMEPLAY	WACKD FLOW	PLANER N	RECHAN	6							GANEPLAT THENE	MLA/SNL			
							Free CircleOres Mail Juring	Peeduturs	Voting Solid	Carry Objects Heavy	Carry Olderick Light	Furned Name	Steatth	Easts Organia	Paulo Objecta		Tarcy pur Plate anni-a Plate anni b Plate tare b	Pada meneral Pada meneral SWG-4 SWG-4	Assad (Affin a	Decigen 1 Decigen 2 Contendition
Razone												_								
an i ratar	Togethine of y broken & barring	mgi Nasi - Waritan & shubay		Las Arm HOT Franker Fighters	Dates Tavena Meix Durbpis	Bion Gurgley Transmed Gurgley	××		×	×	2		×			Basic (burgley Transpool Compley	×		×	
or jutati	Tagatose sity bolten & burning	nigt Nask - War-tan & artichey	Dise 2	Las Arris HO? Freedort Fighers	Distan Taxena May Durtgres	Real Durpley Transmit Gurpley	××		×	×	,		×			Basic Gurgelay Transmal Gurgelay	×		×	
and division	Trapateue sity botton & Barring	regit Nave - Yourstan & stration	Ola-2	Lat Arm HST Presiden Figtane	Centre Tavene Micy Qurlights	Next: Durginy Transmit Curginy Delto higher ground (high)	x x	,	< x	x	,	c	×		*	Bhatic Gunding Transmit Gunging	×		×	
	Negative stylenau & Darsing	righ News - Werton & articley	04+3	Laz Arris HOT Freedom Fighters	Denze Texene Minor Guntighte	Bott close to Los Array	* *		• •				×			Basic Gurgelay Transmit Gurgelay	×		*	
142	New area unliabled at City	righ faun - Werten & Proley	Office Dana 1 Canadanan	Lai Arry HOT Freedori Fighters	Tavene Mep Fight	Rest Sumpley Transmit Gurpley	××				,	6	×			Buest Gurantay Transmall Gampiay	×		×	*
uraja.	Temple complex built in the matche of the sty	rywence	Dine Sera-1 Cermianar	Lacking HOT Freedom Fighters Development	Explore Problem Solve Electore		××	×	< x	××	×			××			×		×	x
	Oig + Two Yang	Tigh Minkor	Dete 1	Lai Any HOT Realish Fighers	Eningen [®] (st) Chear		×	Ш		*	2						×		×	×
Train	Thereitor for appore of					1	Land.	1.1			-		121		-	r				Ter T
unitics have	D tables Lower solvey report. Oritique risk facto, bambios Romete, and declard mesonance						×				2		×	×			×		×	×
unhoj tuno arrangte unhoj tuno 2 unhoj tuno 2	Los unos E Pañolos		-			Patt antis como Huska Meteo Gurdigh un Husk Patt antis como Huska	×	1	#				1	×		7 all anto speca Visika Nelles Guittari or Pulli 7 all anto speca Visiko	×		×××	
using convey loop white convey and						Notes control of Euch Part only covery truths Notes Controls on Euch Truck driver's free child, ump off Defails Rock amazine into citrade	x	H	Ħ		2.2		Ŧ	x		Characture Carl Sol Solar Pail anto poly trucks Violae Garrigh on Pails Truck & Solar Solar Solar Sola Jamp of Truck & Solar America (Sola Jamp of Defan Solar america (Solar)	×		x	
und loop off loop off loop						LightCark Turnets	x				1			X		CyttCark Terrate	XXX		XX	×
eff cervey log- off end mask							X	Н			100			X			1××		Â	x
Tain-Weck													_		_					
			Nore	Las Arris Weber													×		×	×
Vilage																				
magay tillaga	Wage m Its jure state Costfu & allve vis Hand, while Generating environment		Partie Drata Natour Villagen Dario unter Britefu		Must be stagers															
ice-Care													-							
tarent 1			Record			1	xx	×												

Answers to question WHAT?

The high-level vision of the feature that describes the player experience, should be created before the implementation, and has very few changes during the implementation.

Has an extremely high cost of the mistake.

Macro Design format

LEVELS	LOOK	TIME OF GAM/ WOOD	ALLY-APC	ENEWY MODELS	MACRO GAMEPLAY	WACKD FLOW	PLANER	WEDAN	103							GANEPLAY THENE	115.4.2	SAR.					
							Free OrehOyrus Mail Jung	Free Bages	Markey Swing	Carry Otjacts Nerry	Carry Oljects Ught	Furnal Rober	Cheelth Sheelth	Easter Manimu Chineta	Fush-Objects Breaklan		Farepar.	Prostansity	Plaid multive a	SW0-1 SW0-1	Assarbitible a	Souther 2	
Razone												_			_								
an i ratar	Togethine of y broken & barring	mgi Mare - Waritan & shickey		Las Arra VOT Francisco Figitaria	Dates Tavena Meix Durbpis	Bion Gurgley Transmed Gurgley	××		××		2		×		×	Basic Durpley Transmal Gargiey	×				×		
ter (stats	Tagatose sity bolten & burning	nigt Nave - War-Seri & urtsbay	Ohe 2	Las Anny HOT Designer Fighters	Distan Taxena May Durtgres	Real Durpley Transmit Gurpley	* *		××		,		×		×	Basic Gumplay Transmart Gumplay	×				×		
and brails	Trapateue sity botton & Barring	regit Nave - Warmer & stration	Dia-3	Las Arris HOT Freedom Fighters	Centre Tavene Micy Qurlights	Next: Directory Transmit Curryiny Delto higher genand (hose)	x x		x x 1	c	,	c	×		x	Basic Guister Transmid Gurginy	×				×		
	Negative stylenau & Darsing	regil Neuro - Warrison & articheg	Chield	Las Arry HOT Freedori Fighere	Denze Texene Minor Guntighte	Bott close to Los Array	* *		* *				×		*	Basic Gunder Taxonal Gunglay	×				×		
142	You and shaked at City	righ faun - Werten & showy	Office Data 1 Canadaman	Lai Arry HOT Frankri Fighers	Tavene Mep Fight	Reen Sumalay Transmal Galiptity	××				,	6	×			Buest Gunality Traininal Gunplay	×				×	*	
aras.	Temple complex built in the matche of the sty	ryakrosa	Dias Sara-1 Caracianar	Las Arry HUT Rowson Parters Device Executions	Equire Philam Solia Escape		××	×	x x :	×	×		•	××			×				x	x	
	Oig + Two Yang	Tagit Braker	Dere 1	Lai Any ICT Nexton Fighers	Eningen [®] (st) Chear		×				P						×				×	×	
Train .												-					-		-	_	-		
rate stay valley	Di salva Leser valley tepan. Ortevan na faito, banbos Gravis, and delari mantacia						x			l	2		×	×			×				×	×	
unites Lana amongra unites hono 2 unites compres 1/20	Late which is the horizon		-			Patt antis conce trusta Meteo Garrigh un Pack Patt antis conce truste	××			H	1010		+	X		Fall anto sovice touries Steam George or Inuits Fall anto sovice Yoshi	×××		Ħ		x	×	-
who cover top					-	Notes control of Each Part only covery toules Notes Controls on Note Toute Anna's been child simplef Index Rods acceptes 100 citizes	x				2		Ŧ	x		There is a first to the Part and provide to the Weiter Gentler, or have Nuclearly four and unreast before built an activity role utfleter	×	H			x		
unted large with bridge with large			-			Lightbes Taxate	X			H			ŧ	*		LightDark Turinals	1 A	Ħ	Ħ		XXX		
off corvey log- off and mask							X				100		ł	X			XX		Ш		X	x	
Tall-Weck			Norm	Las Arris Water					Т			П	Т			1					×	×	
Village																						-	1
magan kilaga	Wage in its pure state Octority & afres vs. Hereit, which diamonally animpriment		Mariae Duina Maiatear Villagen Daria yamar Buhafur		Mart Incutagent													Π			10		
ice-Cave							•											-					ī
to-see 1			Record			1	××	×															

Macro Design should be short

Good Macro Design is clear, short and has a high level of abstraction. Formats can be different: Creative Brief, 1-pager, table of levels, etc. This is your answer "Where do we go?"

And with proper abstraction level

17/80

UNCHARTED	2 Macro Design																										
LEVELS	LOOK DESCRIPTION	TIME OF DAY/ MOOD	ALLY-NPC	ENEMY MODELS	MACRO GAMEPLAY	MACRO FLOW	PL	AYER	RMEC	HAND	cs								GAMEPLAY THEME (FOCUS)	w	EAPON	s					
							Free Climb/Dyno	Wall Jump	Free Ropes	Monkey Bare	Monkey Swing	Balance Beams	Carry Objects Heavy Carry Objects Light	Traversal Gunplay v.1	Forced Melee	Stealth	Swim Meeting Oblaster	Push Objects	enocuars	Trang-gun	Pistoi-semi-a	Pistol-full-a	Pistol-revolver-a Pistol-revolver-b	SMG-a	Assault-Riflo-a	Assault-Rifle-b Shotgun 1	Shotgun 2 Sniper-Rifle Crossbow
Warzone																											
war-1-market	Nepalese city broken & burning	High Noon - War-torn & smokey		Laz Army HOT Freedom Fighters	Explore Traverse Minor Gunlights	Basic Gunplay Traversal Gunplay	×	x		×	×	×		×		×		,	Basic Gunplay Traversal Gunplay		x				×		
war-2-streets	Nepalese city broken & burning	High Noon - War-tom & smokey	Chloe-2	Laz Army HOT Freedom Fighters	Explore Traverse Minor Gunlights	Basic Gunplay Traversal Gunplay	×	x		×	x	×		×		×		a	Basic Gunplay Traversal Gunplay		×		rë të		x		
war-3-inside war-4-highrise	Nepalese city broken & burning	High Noon - War-tom & smokey	Chloe-2	Laz Army HOT Freedom Fighters	Explore Traverse Minor Gunfights	Basic Gunplay Traversal Gunplay Get to higher ground (hotel)	×	x		×	×	×		×		×		3	Basic Gunplay Traversal Gunplay		×				×		
city	Nepalese city broken & burning	High Noon - War-torn & smokey	Chloe-2	Laz Army HOT Freedom Fighters	Explore Traverse Minor Gunfights	Skirt close to Laz Army	×	x		×	×	×		×		×		3	Basic Gunplay Traversal Gunplay		×	in an			×		
city-2	New area unlocked of City	High Noon - War-torn & smokey	Chloe Elena-1 Cameraman	Laz Army HOT Freedom Fighters	Traverse Major Fight	Basic Gunplay Traversal Gunplay	×	x				×		×		×			Basic Gunplay Traversal Gunplay		×	24			×	×	
temple	Temple complex built in the middle of the city	mysterious	Chloe Elena-1 Cameraman	Laz Army HOT Freedom Fighters Dead Expeditions	Explore Problem Solve Escape		×	x		××	x	x	x x		,	•	××				x				x	x	
oity third pass	City + Train Yard	high tension	Elena-1	Laz Army HOT Freedom Fighters	Escape/Fight Chase			×				×		×							×				×	×	
Train					r		_		_			_									-						
train intro valley valley toop	Transition from warzone city to valley Lower valley region. Chinese rice fields, bamboo forests, and distant mountains						x x							×		x	*	:			×	-			x x	×	
valley lake straight	Lake wivista to the horizon					Fall and access basis	x							х			×	1	Fall ante energia trache		x	_			x	x	
valley loop 2						Melee/Gunfigh on truck	x							x		-	×		Melee/Gunfigh on truck	_	x	-		-	×	_	
valley convoy intro						Melee/Gunfigh on truck Fall onto covoy trucks	x		$\left \right $		+			x	10 P	+	×		Melee/Gunfigh on truck Fall onto covery trucks	-	x	-	\vdash		x	_	_
valley convoy end						Truck driver's been shot, jump off before truck smashes into cliffside	x							x			×	:	Truck driver's been shot, jump o before truck smashes into cliffsin	ff de	×				×		
tunnel loop			2			Light/Dark Tunnels	X	12		1			2	X			X		Light/Dark Tunnels	-	X	_			X		
cliff loop			ĵ î				x			1		-		x			×				x	-			x	x	
cliff convoy intro			2				X			-	+	-		X		-	2			_	X	-			X		
diff end crash							x					10	t i	x			x			_	x	100	100 A.		x	x	
Train-Wreck																											
train-wreck			Alone	Laz Army Winter																	×	37) 22			×	×	
Village																											
Happy Village	Village in it's pure state. Colorful & alive vs. Harsh, windy (barren-ish) environment		Parka-Drake Rescuer Villagers Elena-winter Schaffer		Meet the villagers!															T							×
Ice-Cave																											
Ice-cave 1			Rescuer				x	x		×																	

18/80

Micro Design



Answers to question HOW?

A detailed description of the features that takes in account all technical restrictions. Should be created during the implementation.

Might have many iterative changes.

Micro Design format



Micro Design should be short and specific

Micro Design should be as specific as possible, and take in account details and edge cases.

Formats: tables, wikis, to-do lists, mock-ups.

Just enough to keep tracking.

Macro Design vs. Micro Design

80% of Design is an iterative LIVE process

21/80



20%



20% of WHAT (macro design) and 80% of HOW (micro design). 80% of design made during the implementation!

Game Design is about **execution**!

Obstacles on your way



22/80

Bad Macro Design



Wrong abstraction level

Unclear or not polished

Misinterpreted

Can lead to grave problems with the game scope

Solution: Clarity



CLARITY is the key

Invest more efforts to reach clear Macro Design.

Support your text by visuals to avoid misinterpretation, texts can be deceiving.

Clarity can be developed!

Clarity exercise





Use 'elevator pitch' technique

Write your idea in four short sentences. Or less. Imagine that you have ~30 sec to tell them.

If you cannot write it clear enough in four sentences or less – your idea is bad.

Support your idea by visuals

Macro Design reduces risks



It might be not enough to make a document

You build an interactive experience, and words and pictures are **not interactive**.

You may need to test your Macro Design to reduce risks.

You may need the prototype

Bad Micro Design



Not ready

27/80

Don't take details into account

Too abstract

Can lead to design **bottleneck**

Solution: Timing & Clarity



Develop **CLARITY**

Clarity and visuals are also important for Micro Design.

But there's another main point: Micro Design is iterative and constantly changing, so timing is very important.

Be just far enough ahead of the team





Feature Creep



'Design by committee'

Some features are more equal than others

May increase complexity exponentially

The main source of scope problems

Solution: Feature Cut



Less is more.

It's better to make fewer features but with higher quality.

Develop the "composition" sense and don't be afraid to cut bad features.

Design is good when you have nothing to cut

Feature ROI Matrix



32/80

Feature risk Matrix



Feature value

Value	ROI	Risk	Classification						
V1	R1 (Competitive)	Ro ('Free')	Competitive						
V2	R1 (Competitive)	R1 (Commitment)	advantage						
V3	R2 (Strategic)	Ro ('Free')	Stratagia advantaga						
V4	R2 (Strategic)	R1 (Commitment)	Strategic advantage						
V5	R3 (Polishing)	Ro ('Free')	Doliching (Quality						
V6	R3 (Polishing)	R1 (Commitment)	Polisining/Quality						
V7	R1 (Competitive)	R2 (Experiment)							
V8	R2 (Strategic)	R2 (Experiment)	Experiments						
V9	R3 (Polishing)	R2 (Experiment)							
V10+		Too risky							

Unconscious incompetence



Wrong risk assessment

Outdated knowledge

Previous experience bias

Decrease quality of decisions

Solution: Team feedback



Ask the designer!

Give feedback on the design as early as possible. The more feedback, the better.

Demand **clarity**, until you get it




Competitors constraints are unknown

Might not work for your product

'Lazy design'

Decrease quality of decisions

Solution: De-construction



De-construct to clone properly

Cloning isn't necessarily bad. The fewer obstacles on the player's way, the better; standard solutions are great for that (3C/UI/etc.) Features are your tools to create an experience.

Fundamental knowledge will help you

Design	
Experience	s all about player experience, remember it in any design decision.
Clarity	Know what design you do (Macro or Micro), choose proper abstraction level and aim for CLARITY.
Execution	Game Design is about execution, control your feature scope and aim for high quality of decisions.

COMMUNICATION PRINCIPLES

Stage 2

Errare humanum est



People are imperfect

People make mistakes, they're biased and usually bad listeners. The worst: you have no other people.

You can't change them

Designer is also imperfect



You as a designer is also imperfect

42/80

You cannot know everything and can't plan in advance the full and detailed vision of the game.

You vision is **limited**

Shared design



Share design with your team!

People on the implementation level know more details and can help you to reach the much higher quality of design decisions.

Give freedom to artisans!

They will become personally invested

Cross-disciplinary collaboration



Gather people from different disciplines

44/80

Include to design discussions people who will be implementing your feature, they know each 'part of the puzzle' and can significantly increase the quality of the design.

Such collaboration can create **magic**

Conflicts



Task conflicts can be good for the project

If you have a lot of small and medium task conflicts, it's a good sign that team is alive and care about the project.

Also, try to solve all process conflicts on the early stage.

BUT: Never get personal!

Integrated Decisions



Look for Integrated Decisions

Combine different ideas and approaches of your team to produce the best solution.

Include team's creativity into them

• Obstacles on your way



47/80

Documents



Become outdated fast

Hard to maintain in up-to-date state

People don't read (and don't want to)

Source of **bottlenecks** on the project

What to do with the documents?





Make your documents digestible

49/80

Usually, people don't read more than 1 page at a time. So, don't make document longer than 1 page! Or divide them into 'digestible' blocks. Remember, that words can be deceiving.

Support them with visuals

*Excel tables + Mock-ups

I have bad news for you...



You'll never have 100% correct documents

50/80

People don't read even the best documents

There are many other communication channels!

You'll always be criticized for 'outdated docs'

Solution: It is LIVE!



Documents are not made of marble

We still often live by the old stereotype that there's possible to have 'final' GDD.

Try to treat documents in a similar way as code: like something LIVE.

Documents are LIVE and may have bugs

Magic tool for the designer



Talk directly

52/80

Game Design is a LIVE process that is based on constant iterations and feedback gathering. Feedback from direct communication is MUCH faster than any other.

This is the fastest way

If you work remotely

BRACE YOURSELVES



Use 3rd clarification rule

If the question not answered in three e-mails, you must call.

Otherwise, your mail thread might be almost infinite.

Get direct feedback if mail is not working

Expert arrogance



Design can be blocked by an 'expert opinion'

It might be fear of responsibility or just laziness

It might be personal or political

Can unreasonably block some features

It's not a rocket science



Demand CLARITY from the 'expert'

In the most cases, the 'expert' is afraid of potential risk (personal or the project) and overvalues the complexity of the feature. Get more information, ask questions and separate facts from the 'expert opinion'.

Focus on WHAT you want, not HOW

• 'Not invented here'



People love to create something new

Which leads to conflict with business goals

Big problem, if you have demanding customer

Feedback perceived as an attack on ownership

It's all about the player



There is a common ground

57/80

All the desires of 'wheel invention' should be evaluated how valuable are they for the player.

It can be a common ground for the team and the customer.

The player is a King

Stakeholders feedback



Inadequate

Stakeholders contradict each other

Force you to make more that was negotiated

Can ruin your scope (and you will be blamed)

Stakeholders are people



You are reviewed by imperfect people

Stakeholders are also imperfect, they have limited vision and judge based on that vision, not necessarily because they're bad.

Talk to them, explain your decisions

Hidden Stakeholders



There are people who can say you NO

There might be some people on the project who are not officially stakeholders, but can block your design for some reasons (processes, technical, etc.).

Find them on the **early stage**

Communication



IMPLEMENTATION PRINCIPLES

Stage 3

Truth about players



"Creature who can fill the Louvre with all the shits he doesn't give"

It doesn't matter how many problems you have

Your problems with scope, resources, deadlines, whatever else just don't matter for the player. The only thing that is valuable for players is their personal experience.

The player is like Honey Badger

*Doesn't give a shit

63/80

Iterate, iterate, iterate...



Almost always, it's innovation

Game Design is very similar to innovation adoption process, and impossible without many iterations. Be ready to fail (and learn from it, of course), it's a natural process.

Implementation is **discovery-driven** learning

Playtests



You create an interactive experience

There is only one opportunity to see your **real** game: playtest.

In Game Design, you can believe only in things that you can interact with.

Playtest is a part of **discovery-driven** learning

Feedback



Do not trust too much to what people say

Your playtesters are also imperfect, and might have very weird ideas how to improve your game. Look for the player's insight.

See what they <mark>DO</mark> in your game

Do not afraid of design changes



You design can fail

67/80

The design of your feature can fail on the implementation stage for many reasons (in many cases, not because it's bad).

Re-design or just **cut** this feature





The player **does not see** your back-end

In many cases, you just don't need a sophisticated technology to create the experience for the player.

If you can't implement something, fake it!

Obstacles on your way



69/80

Processes cargo cult



Processes are more important than the game

70/80

Treat people as 'resources', not persons

Overinflated importance of process decisions

Can slow down or even stop the design process

Do we REALLY follow Agile?



The solution is simple...

Individuals and interactions over processes and tools.
Working software over comprehensive documentation.
Responding to change over following a plan.

....but very hard to follow

*agilemanifesto.org

71/80





ETA for 'cool' features is shorter

ETA for 'boring' features is longer

ETA misinterpretation

Source of scope problems
Everybody lies



Do not trust estimates

Know your team and what features and tasks they like. Do not trust long estimates especially. Feature functional =! Feature complete

Use **Batching** for similar features

Low flexibility



Long iteration time

Bad tools

Complex approval process

Can stop design and polishing process

Fast to test



Fast iterations is a key to good design

Game Design is a way of discoverydriven learning.

If you want good design, all you processes and tools should be focused on making iteration time as less as possible.

The faster you go to play, the better

Start polishing early



Quality comes from polishing

Final player experience appears on the **polishing** stage, after you tested how the player **interacts** with your game.

Shorter iteration time will allow you to reach the polishing stage faster.



Implementation

Player	Players don't give a shit about your problems. They only care about their personal experience.
Interaction	You can believe only in things that you can interact with. Iterate, playtest, gather feedback.
Processes	Even the best processes and plans can fail because of people imperfection.

To summarize



Sources

- (D.I.C.E. 2002) Mark Cerny, THE METHOD
- (TED) Linda Hill, 'How to manage for collective creativity'
- (Coursera) Leading Strategic Innovation in Organizations
- (D.I.C.E. 2010) Naughty Dog Presentation
- (GDC 2010) Among Friends An Uncharted 2: Among Thieves postmortem
- (GDC 2012) The Last 10: Going From Good To Awesome
- (GDC 2015) Hearthstone: How to Create an Immersive User Interface
- (GDC 2014) Hearthstone: 10 Bits of Design Wisdom
- (GDC 2013) Through the Grinder: Refining Diablo III's Game Systems
- (GDC 2010) Blizzard Design Philosophies

*any questions? thank you very much 80/80