

# Video Games and HCI

Anna Loparev

Intro HCI

04/02/2013

## Video Games and HCI

### Importance of Games

## Importance of Games

## Novel Input Devices



3

## Importance of Games

## Serious Games: GWAPs

Shake sidechains to improve the protein. Hintkey: 5

Shake Wiggle Clear Locks and Bands Reset Puzzle Mouse Help

Rank: 17 Score: 9092

48: Pro Peptide

Group Competition

| # | Group Name      | Score |
|---|-----------------|-------|
| 1 | The Lone Folder | 9388  |
| 2 | Street Smarts   | 9367  |
| 3 | Worms           | 9263  |
| 4 | Backslay        | 9255  |

Player Competition

| #  | Player Name | Score |
|----|-------------|-------|
| 16 | psn         | 9098  |
| 17 | kathleen    | 9092  |
| 18 | merast82    | 9091  |
| 19 | darkness    | 9081  |
| 20 | icecups     | 9066  |
| 21 | mbporkygen  | 9048  |
| 22 | sidderson   | 9038  |

Chat

4

## Importance of Games

# Serious Games: Education / Health



5

## Importance of Games

# Academic Tool

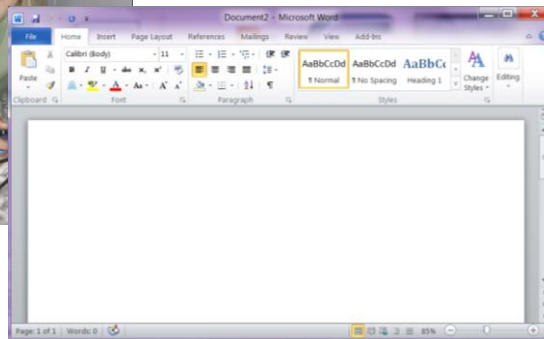


6

## Tools vs. Toys

7

## Process vs. Results



8

## Tools vs. Toys

## Defining vs. Importing Goals



9

## Tools vs. Toys

## Few vs. Many Alternatives



10

## Tools vs. Toys

## Consistency vs. Variety



11

## Tools vs. Toys

## Constraints



12

## Tools vs. Toys

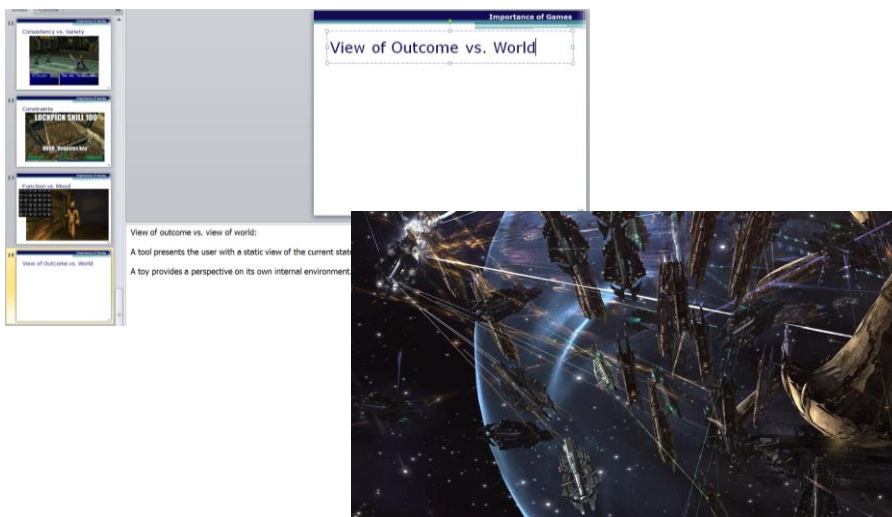
## Function vs. Mood



13

## Tools vs. Toys

## View of Outcome vs. World



14

## Tools vs. Toys

## Org vs. Individual Buyer



15

## Tools vs. Toys

## Function vs. Form



16

## Tools vs. Toys

## Standard vs. Novel Input



17

## Tools vs. Toys

Tools vs. Toys:  
HCI to Video Games

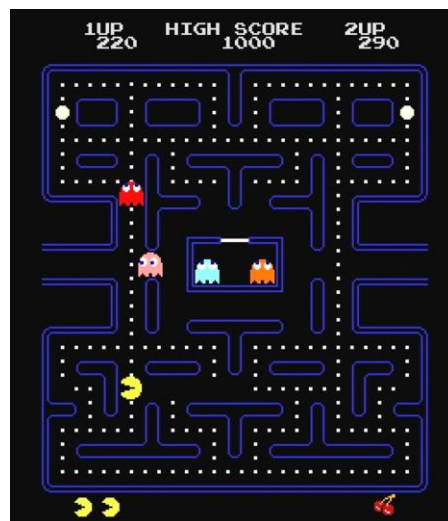
18

## Intuitive



19

## Learnability



20

## Demographics



21

## Heuristic Evaluation



22

## User-Centered Design

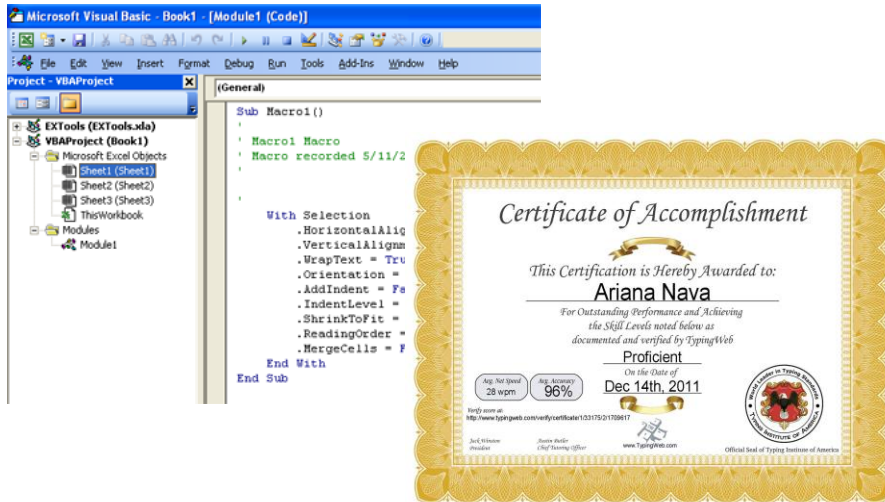


23

## Tools vs. Toys: Video Games to HCI

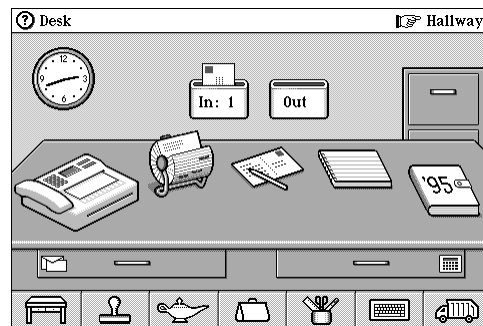
24

## Challenge



25

## Fantasy



26

## Curiosity



27

## Tools vs. Toys: Usability Principles

28

## Tools vs. Toys: Usability Principles

## Effortless Community



29

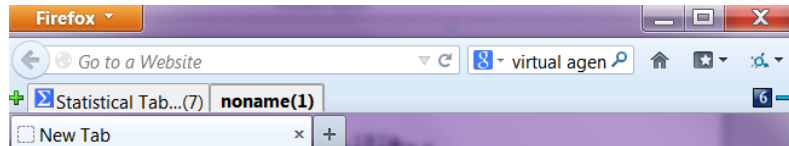
## Tools vs. Toys: Usability Principles

## Learning by Watching



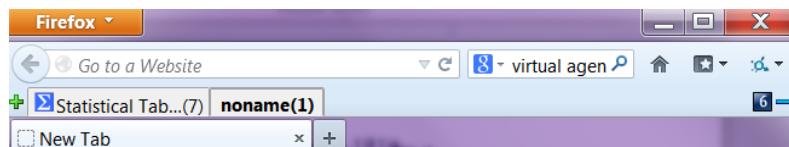
30

## Deep Customizability



31

## Fluid SHI



32

## Cooperative Design Patterns

33

## Complimentary Roles



34

## Synergies Between Abilities



35

## Support Abilities



36

## Coop Design Patterns

## Shared Goals



37

## Coop Design Patterns

## Synergies Between Goals

Map: Hydro

BLU 15 players Preview 01 spawn 15 players RED

Score: 01

| Name                  | Class    | Score | Ring |
|-----------------------|----------|-------|------|
| MDM [DQ] TheOnlyHorse | Medic    | 64    | 75   |
| Masen™                | Demoman  | 58    | 43   |
| ? Bengt               | Demoman  | 46    | 39   |
| Exodus :3             | Spy      | 45    | 64   |
| Bigmeanie             | Spy      | 35    | 56   |
| ? JoinTheHell         | Demoman  | 35    | 54   |
| neuraxiz              | Engineer | 27    | 69   |
| 668                   | Soldier  | 20    | 38   |
| IRDW[und/3het2{[GM]   | Engineer | 17    | 69   |
| ? unaddy              | Engineer | 15    | 53   |
| ? kahb_08             | Engineer | 15    | 35   |
| ? Sprattel            | Engineer | 14    | 48   |

| Name          | Class   | Score | Ring |
|---------------|---------|-------|------|
| Traggleballs  | Soldier | 63    | 194  |
| Ofom          | Soldier | 61    | 51   |
| ? Jester      | Soldier | 39    | 107  |
| Glad all over | Soldier | 39    | 37   |
| ? Khosky      | Soldier | 33    | 62   |
| GWGEdie       | Soldier | 29    | 47   |
| Headcrab Doc  | Soldier | 25    | 60   |
| Muffin Raider | Soldier | 24    | 192  |
| ? R&F         | Soldier | 24    | 78   |
| Jesus         | Soldier | 23    | 95   |
| -BD- Xoro     | Soldier | 20    | 42   |
| ? hoherion    | Soldier | 15    | 28   |

Exodus :3 45 points

Kills: 22 Captures: 0 Involves: 0 Backstabs: 28  
Deaths: 13 Defenses: 0 Headshots: 0 Bonuses: 0  
Assists: 1 Domination: 1 Teleports: 0  
Destruction: 3 Revenges: 0 Healing: 0

38

## Special Team Rules



39

## Camera Setting



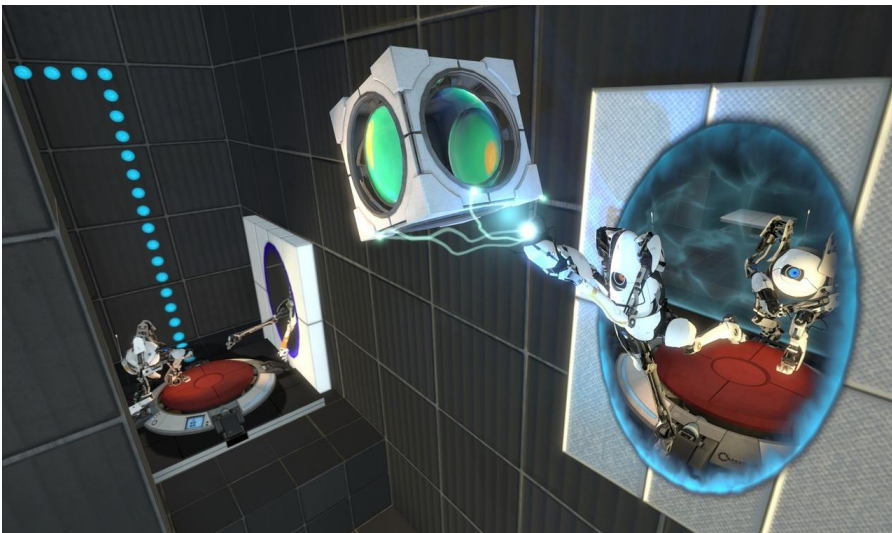
40

## Shared Interaction of Objects



41

## Shared Puzzles



42

## Shared Characters



43

## Target Lone Wolf



44

## Coop Design Patterns

## Vocalization



45

## Coop Design Patterns

## Limited Resources



46

## Coop Performance Metrics

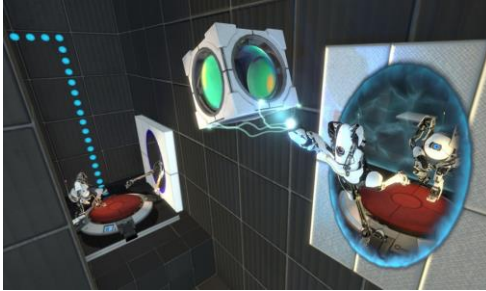
47

## Laughter or Excitement Together



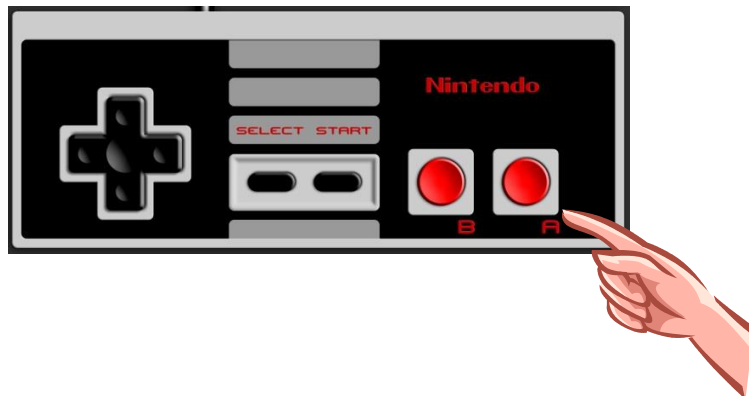
48

## Worked out Strategies



49

## Helping



50

## Global Strategies



51

## Waited for Each Other



52

## Got in Each Other's Way



53

## Collaborative Design Patterns

54

## Limited Resources



55

## Personal Actions



56

## Trace Payoffs to Decisions



57

## Different Abilities

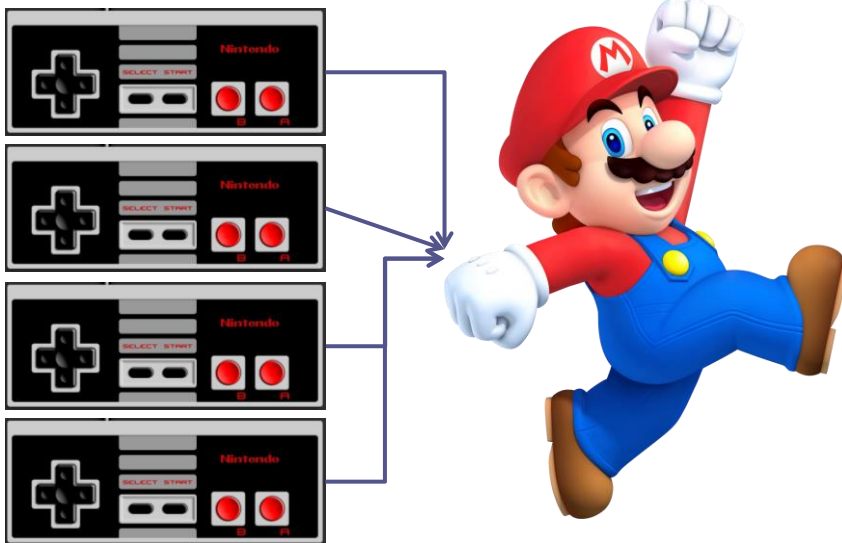


58

## Legion Gaming

59

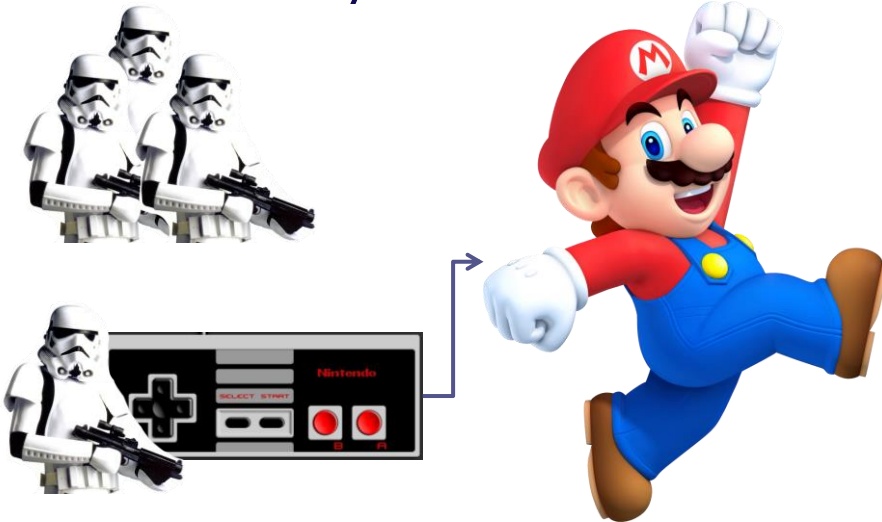
### General Idea



60

## Legion Gaming

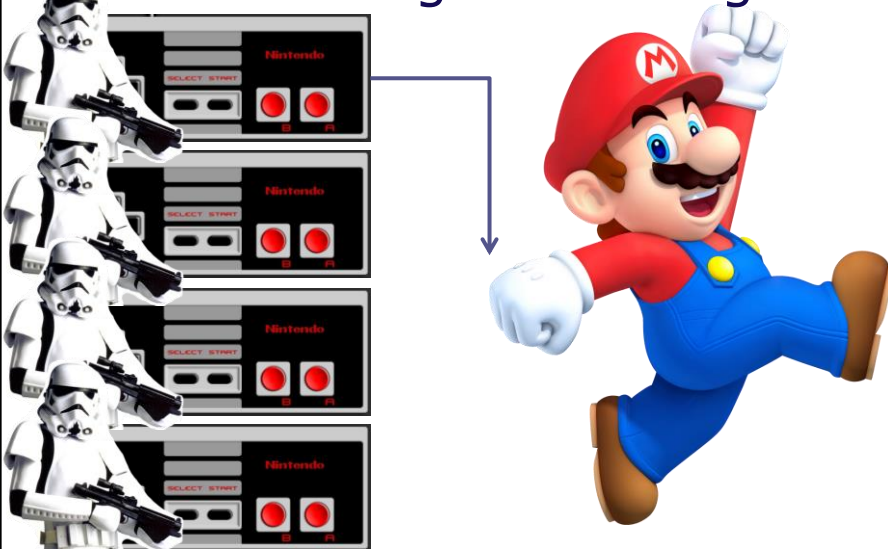
## Traditionally



61

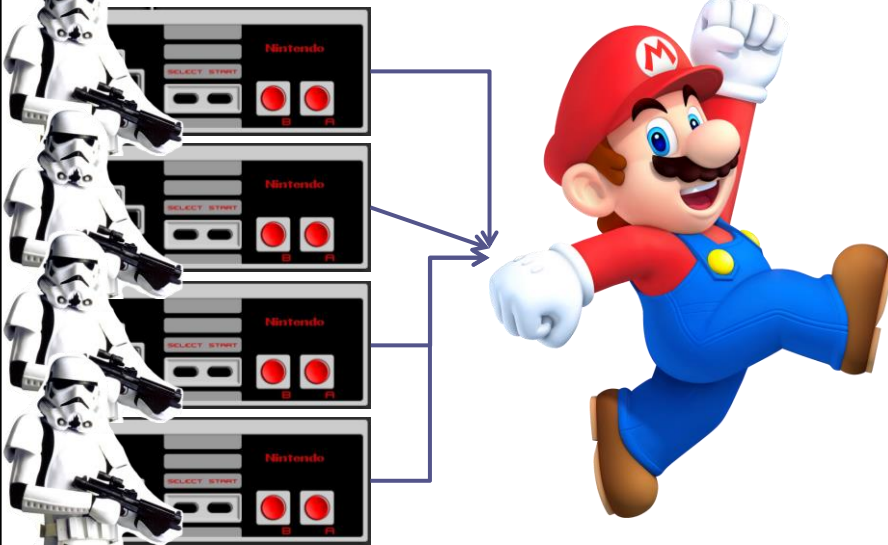
## Legion Gaming

## Turns with Legion Gaming



62

## All at Once



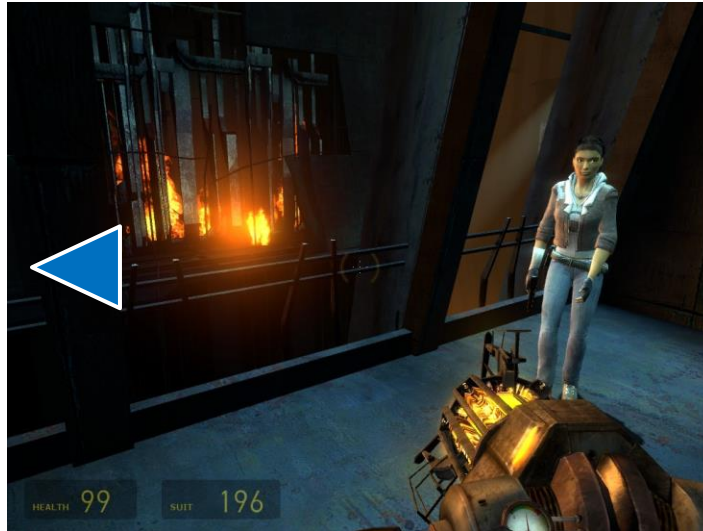
63

## Command Mode



64

## Command Mode



65

## Picture References

- [https://getsatisfaction.com/wakoopa/topics/keyboard\\_and\\_mouse\\_usage\\_tracking](https://getsatisfaction.com/wakoopa/topics/keyboard_and_mouse_usage_tracking)
- <http://www.geekstir.com/the-evolution-of-nintendo-controllers>
- <http://takemydough.com/rat-9-gaming-mouse>
- <http://blog.steren.fr/tag/game/>
- <http://fold.it/portal/info/science>
- <http://www.popmatters.com/pm/post/learning-to-love-the-wii-fit/>
- <http://gaming-tunisie.com/world-of-warcraft-b-c-starter-pack/>
- <http://www.guardian.co.uk/technology/gamesblog/2012/jul/20/five-best-hangover-games>
- <http://www.zdnet.com/blog/mobile-gadgeteer/microsoft-office-for-ipad-and-android-tablets-may-be-coming-in-november/5754>
- <http://www.digitaltrends.com/gaming/gamestop-fights-to-keep-used-games-on-playstation-4-and-xbox-720/>
- [http://finalfantasy.wikia.com/wiki/Final\\_Fantasy\\_VII](http://finalfantasy.wikia.com/wiki/Final_Fantasy_VII)
- <https://memebase.cheezburger.com/videogames/tag/fallout/page/5>
- <http://www.webappers.com/2009/10/21/iphone-ui-icons-for-iphone-applications/>

66

## Picture References

- <http://www.pcgamer.com/2010/09/01/amnesia-the-dark-descent-interview/amnesia-screenshot-1/>
- <http://mashable.com/2013/01/28/eve-online-asakai/>
- <http://www.giantbomb.com/kinect-support/3015-3249/>
- <http://www.notsonoisy.com/tetris/>
- <http://ostatic.com/pacman/screenshot/1>
- <http://www.whataboutwatermelon.com/index.php/2010/03/the-secret-to-farmville-grow-watermelon/>
- <http://www.excel-extools.com/art/microsoft-excel-macros.php>
- <https://ironmaiden4ever.wordpress.com/2011/12/14/certificate-p/>
- <http://www.lisisoft.com/tools/artificial-intelligence-agent.html>
- <http://www.codinghorror.com/blog/2006/05/is-the-command-prompt-the-new-desktop.html>
- <https://play.google.com/store/apps/details?id=com.stumbleupon.android.app>
- <http://www.yiyinglu.com/?portfolio=lifting-a-dreamer-aka-twitter-fail-whale>
- <http://www.families.com/blog/learning-by-example>
- <https://secure.flickr.com/photos/kaiger00/6960978030/>
- <https://www.mobygames.com/game/ps3/ghostbusters-the-video-game/screenshots/gameShotId,544050/>

67

## Picture References

- <http://thebloodthirsty.blogspot.com/2010/08/whirls-5-tips-to-live-longer-in-tf2.html>
- <http://www.dualshockers.com/2012/11/01/review-halo-4/>
- <http://forum.i3d.net/team-fortress-2/54461-team-fortress-2-screenshots.html>
- <http://nukoda.com/news/resident-evil-5-demo-coming-to-xbl-and-psn/>
- <http://www.cheatmasters.com/blog/2012/04/24/legacy-top-10-gamecube-exclusives/>
- <http://www.courier-journal.com/blogs/cjgizmo/labels/games.html>
- <http://www.pastemagazine.com/blogs/lists/2011/12/the-20-best-videogames-of-2011.html?p=2>
- <https://www.mobygames.com/game/windows/lego-star-wars-the-video-game/screenshots/gameShotId,235415/>
- <http://www.gameschasm.com/lego-star-wars-game-15.html>
- <http://starwars.wikia.com/wiki/Stormtrooper>
- [http://eu.guildwars.com/support/article/eye\\_of\\_the\\_north/](http://eu.guildwars.com/support/article/eye_of_the_north/)
- <http://knowyourmeme.com/photos/438101-metal-gear-solid-enemy-alert>
- <http://www.tumblr.com/tagged/left+4+dead+2+challenge>
- <https://en.wikipedia.org/wiki/Mario>
- <http://wallpuper.com/nes-controller-16025-nintendo-wallpaper.html>

68