

Open Source Gaming - Free FUN!

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Objectives

FUN!

Before we begin

- Please save questions for the Q&A period at the end.
- Don't make me taze you! =P
- Prizes will be given out for properly answering questions. Please come pick one item.
- When you see a Chimp a prize might be coming your way.

?

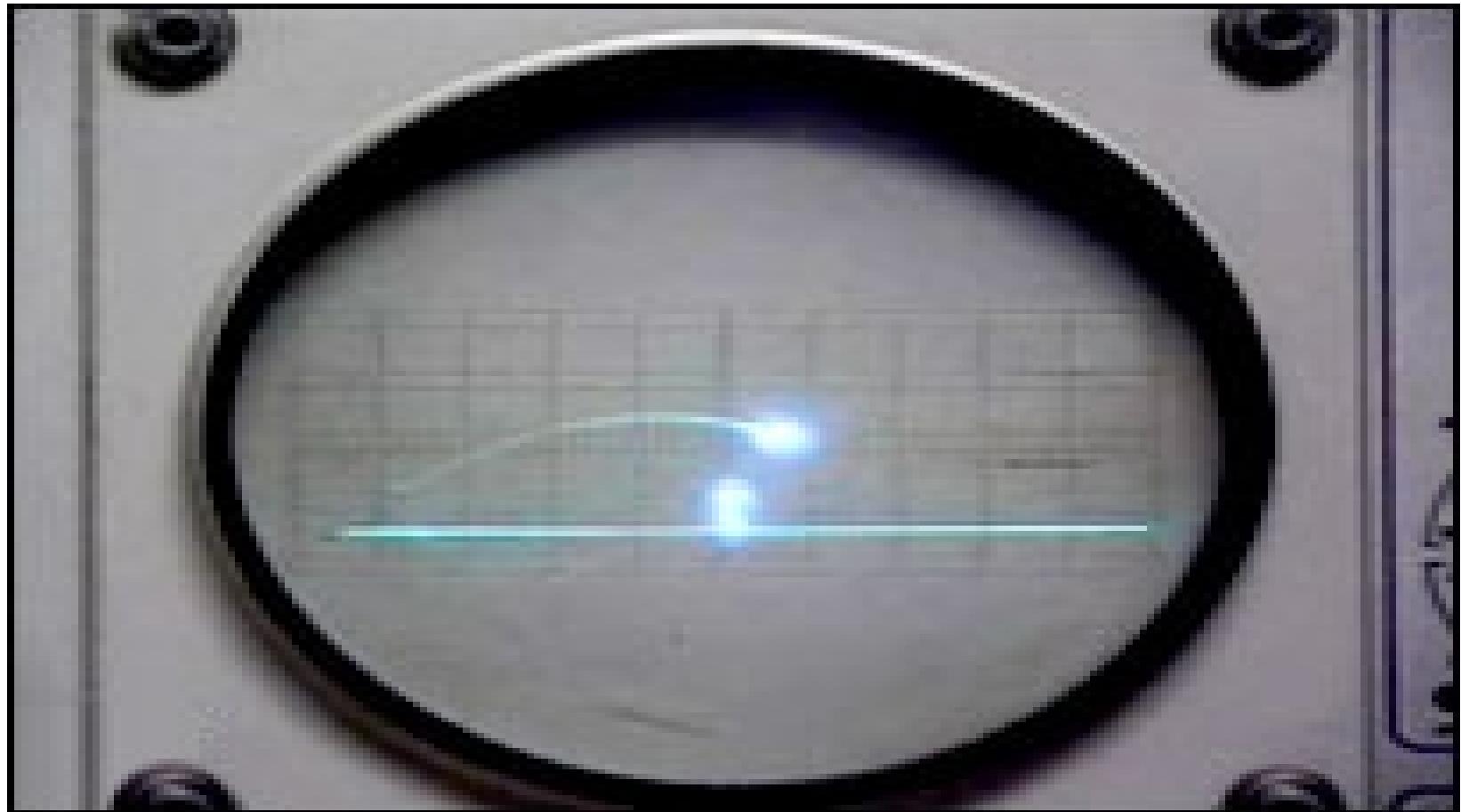


Let's Play!

Identify the game.

NOTE: There are some obviously misplaced items herein. =P

Example

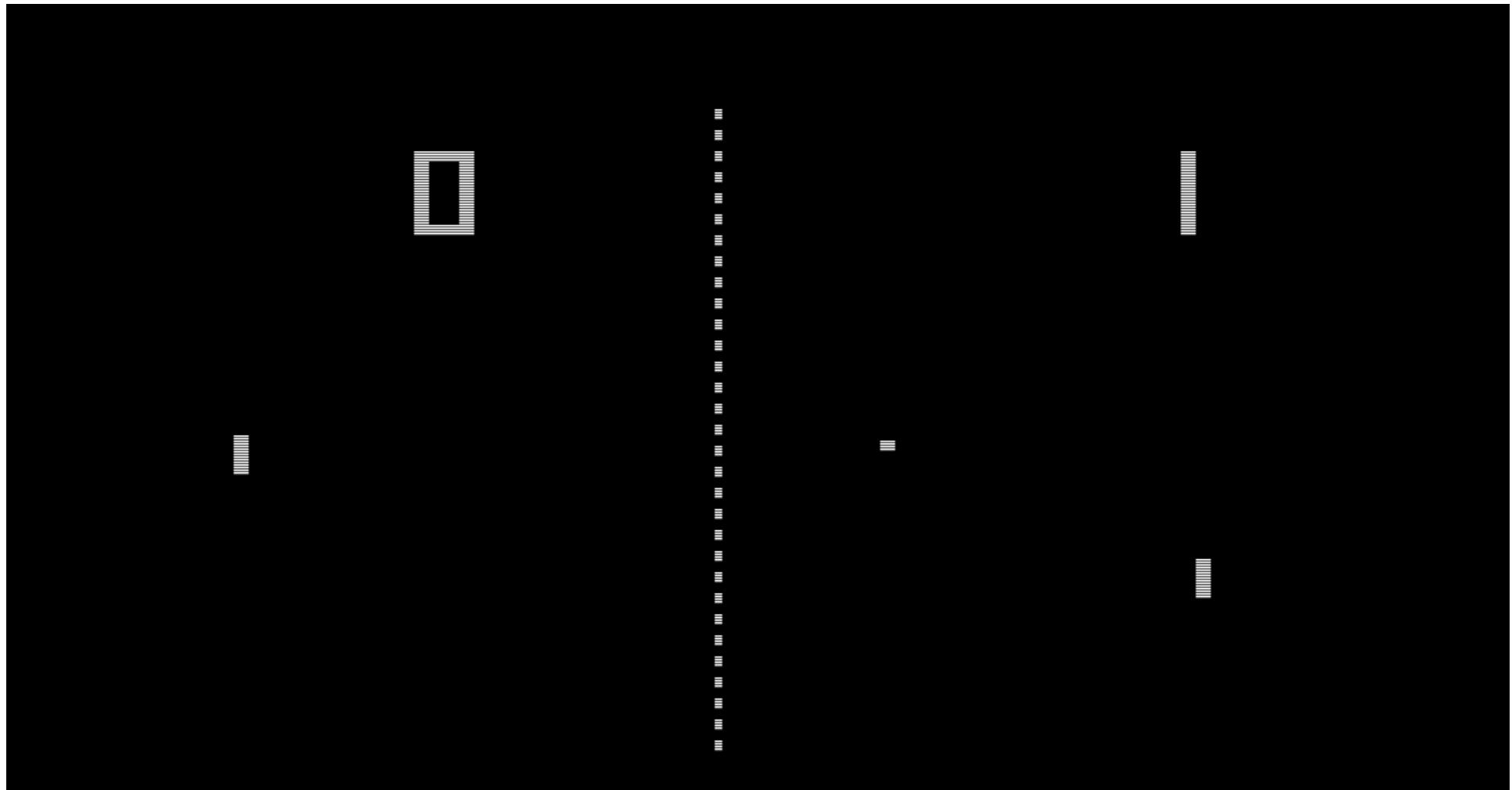


Ultimate Rig?



1958 Physicist William Higinbotham's Tennis for Two game. Now
thats a gaming rig!

Example



©Atari 1972

Example



Example



Example



© Apogee 1996
BTW... I'm still waiting FOREVER!

Example



©Jaleco 1998

Example



© ID Software 1999

Ok...

Now some real objectives...

Objectives

- What the heck is FOSS?
- Top Open Source games in nearly every genre
- State of Linux desktop gaming & survey results
- Science and value of gaming
- Industry overview, challenges and opportunities
- What can we do...

Who am I?

- Joseph Guarino - CEO/Sr. IT consultant with my own firm Evolutionary IT
- Working in IT for last 15 years: Systems, Network, Security Admin, Technical Marketing, Project Management, IT Management
- CISSP, LPIC, MCSE, PMP
- www.evolutionaryit.com

FOSS/Gaming Background

- Started as sysadmin working on Solaris then moved to FreeBSD and Debian in 97/98.
- Gamer since 83
- Pong was my first game
- I love FPS's!
- I'm a member of the [Boston Linux Users Group](#).

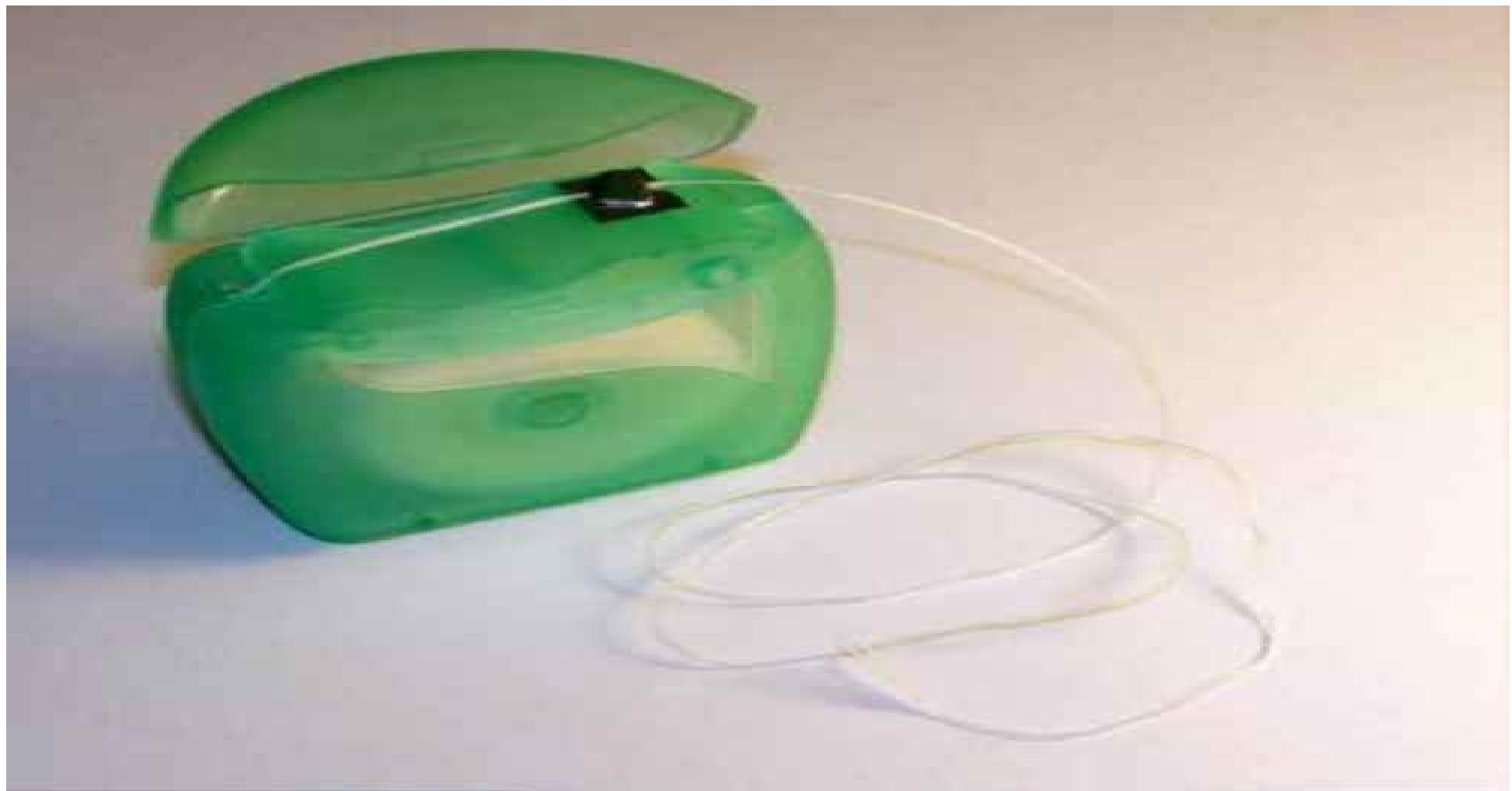
Defining FOSS

Just to clear the air and clarify what we are addressing here.

What is FOSS/FLOSS?

- FOSS (Free and Open Source Software) is a software licensing model that allows anyone the liberty to use, extend and distribute the software as they see fit.
- Alternative term to describe software spectrum from free to open.
- FLOSS or Free/Libre/Open-Source Software.
- Libre is sometimes used to “clarify” the ambiguity of the word free in English.

Umm.. FLOSS!



Two Angles = One Vision

- Free software as championed by the [Free Software Foundation](#) (1985) has a core focus on **FREEDOM** in the technology world.
- Open Source was initially an effort to make free software more marketable championed by [Open Source Initiative](#) (1998). Think pragmatic business focus.
- Often described as different camps, they are effectively different approaches/philosophies on free software.
- WE are all on the same team. Lets respect each other for our similarities and differences and productively work toward common goals!

Chimpy asks or more like demands



Who are these people!?



Different than commercial software

- It's truly free for you to use.
- Commercial software is much more restrictive in terms of freedom, sharing, collaboration – to say the least.
- Produces innovation quickly by the very concept of open, cooperative, collaborative efforts.
- It's the model of the future.

Types of FOSS

The licensing spectrum..

Many FOSS Licenses

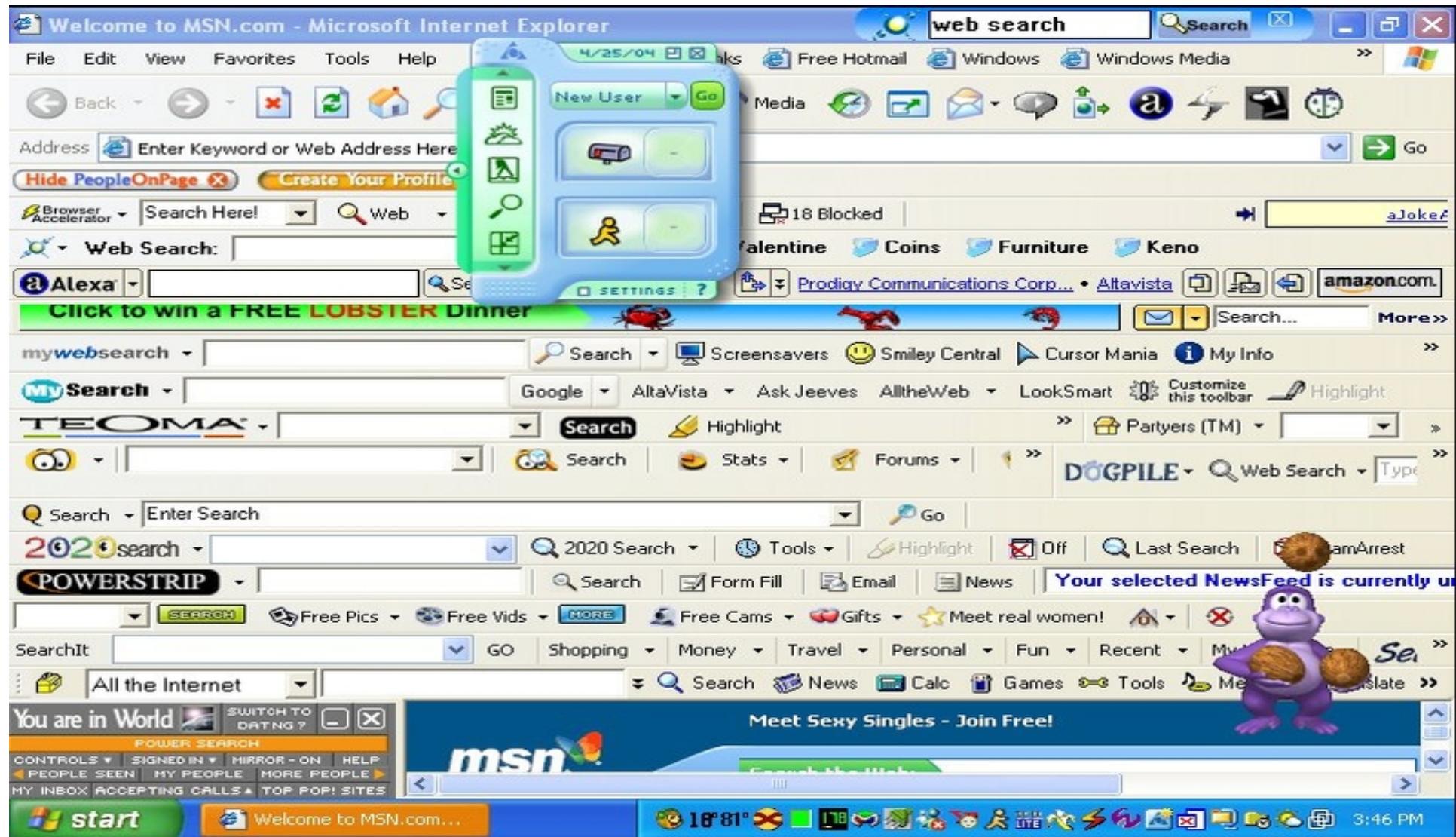
- There are many FOSS licenses each which allow different rights and responsibilities
- Most popular are GNU General Public License, GNU Lesser General Public License, BSD License, Mozilla Public License, MIT License and the Apache License.
- OSI Licenses – OSI Software Definition
<http://opensource.org/licenses/>
- FSF Licenses – Free Software Definition
<http://www.gnu.org/licenses/>



What FOSS is NOT

- ≠ Freeware
- ≠ Shareware
- ≠ Public domain software
- ≠ Malware, spyware, adware, badware etc.

Wha?



FOSS Gaming Genre's

In every existing gaming category there are amazing FOSS games.

Before we begin

- All of these games run on Linux, BSD's(mostly), OS X, and Window.
- All are FOSS games at the core but some game assets are other licenses.
- This is to wet your appetite. For every one I included here there are 100's of others.
- Explore!

Exemplary FOSS Game

Turn based strategy
- involve planning and thinking...

FreeCiv



FreeCiv

- FreeCiv is a TBS (Turn based strategy) game where you build a civilization. Much like the game Civilization.
- You play a tribal leader in 4000 BC, guiding the growth of your civilization.
- Support for Internet/LAN play with up to 30 players.
- Single/multiplayer
- GNU/GPL & available on most platforms.

Battle for Wesnoth



Battle for Wesnoth

- Battle for Wesnoth is a TBS (Turn based strategy) with a fantasy style environment.
- Players build armies of humans, elves, dwarfs, orcs and trolls to battle for Wesnoth.
- Single/multiplayer
- GNU/GPL & available on most platforms.

RTS

Real-time strategy

- strategic wargames and not turn based...

Warzone 2100



Warzone 2100

- Warzone 2100 is a RTS game about post nuclear war late 21's century where survivors, struggle to weather the aftermath. Some scavenge and others called “The Project” seek to rebuild.
- You battle Nexus/New Paradigm (foes responsible for the nuclear war) while establishing bases, conducting R&D and rebuilding earth.
- Single/Multiplayer
- GNU/GPL & available on most platforms.

UFO: Alien Invasion



UFO: Alien Invasion

- UFO: Alien Invasion is a RTS game where you battle invading aliens for control of planet earth.
- It's sci-fi meets military gameplay.
- Single and multiplayer
- GNU/GPL and some non-free CC content and available on most platforms.

Platform Games

Platformers

- characterized by jumping to and from platforms...

Yo Frankie!



Yo Frankie!

- Yo Frankie! is a platformer where you play Frankie, a cute furry (and somewhat aggressive) sugar glider.
- Project in part was designed to promote open source modeling tool Blender.
- Single Player only.
- GNU/GPL Code/ CC game content & available on most platforms.

Teeworlds



Teeworlds

- Teeworlds is a cartoon themed platformer that plays like a classic shooter.
- Good clean fraggin' fun.
- Multiplayer
- GNU/GPL & available on most platforms.

Vehicle Simulation

Vehicle Simulation
- interpretations of vehicle operation..

FlightGear



FlightGear

- FlightGear is a flight simulation tool/game.
- Over 15 default planes (including gliders, helicopters, airliners and even fighter jets) with realistic world scenery
- Dozen of add-on's (planes, geographic data, etc).
- GNU/GPL & available on most platforms.

Torcs



TORCS

- TORCS (The Open Racing Car Simulator) is an open source racing simulation game with more than 50 cars, 20 tracks and 50 opponents.
- Supports steering wheels and joysticks.
- Single/Multi-player
- GNU/GPL and available on most platforms

RPG

Role Playing Games/MMORPG's (Massively
multiplayer online role-playing games)
- one or a group plays a role/character...

NetHack

The djinni speaks. "I am in your debt. I will grant one wish!"--More--



ASCII bliss! @=wizard, %=corpse, #=corridor, "=altar

NetHack

- NetHack is a D&D like role playing game. You play the role of a knight, wizard, fighter or other character on a quest for the Amulet of Yendor.
- Console and graphical versions available
- One of the oldest games still in active development (since 1987).
- GNU/GPL & available on most platforms

PlaneShift



PlaneShift

- PlaneShift is a 3D virtual fantasy MMORPG
 - Free to play, no monthly fees.
- Online multiplayer
- GNU/GPL game engine([Crystal Space](#)), proprietary PCL game content & available on most platforms

Puzzle/Action/Arcade

Puzzle/Action/Arcade

- solve puzzle, engage in all around fun...

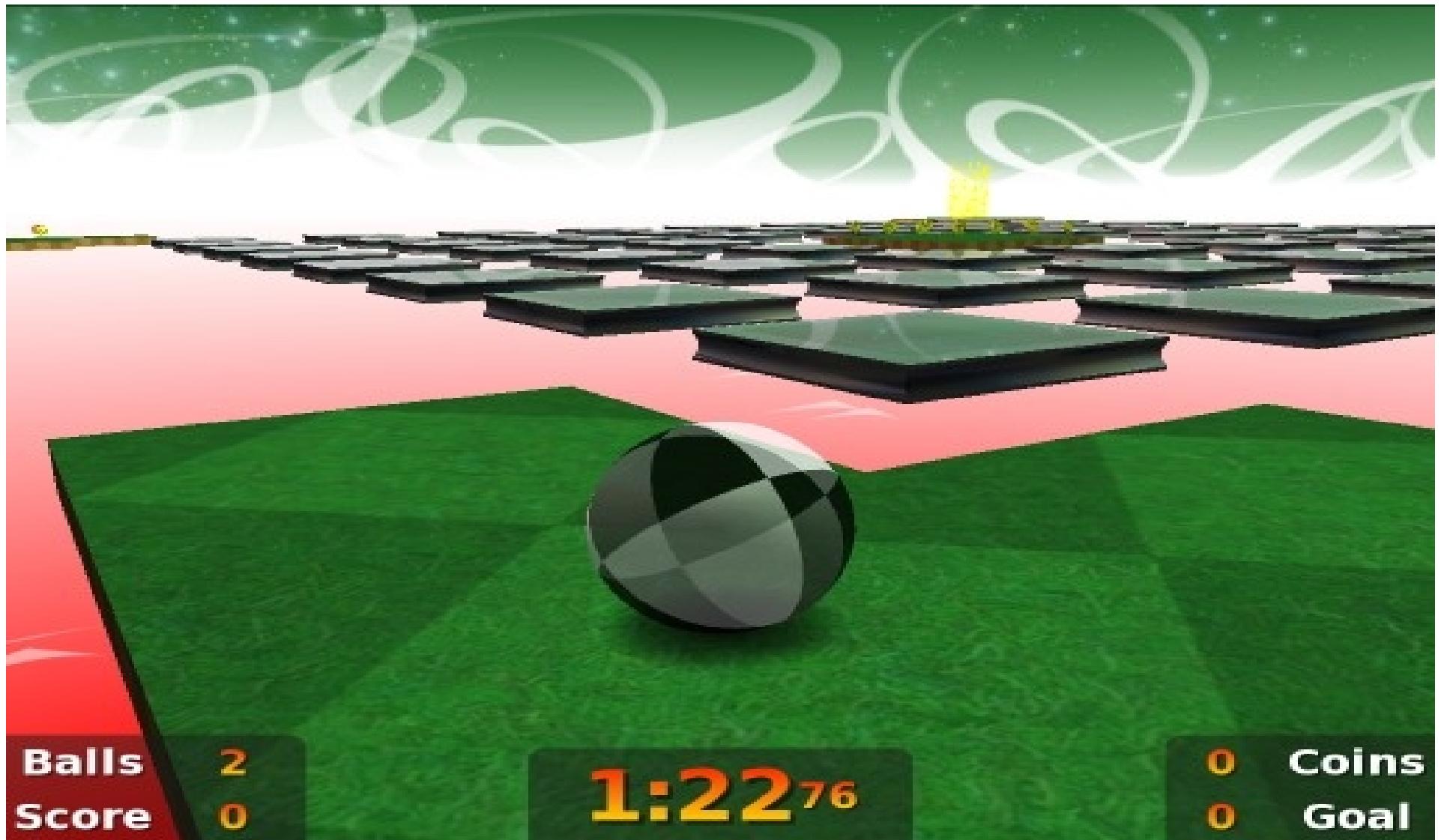
Frozen Bubble



Frozen Bubble

- **Frozen Bubble** Is a game where you play Tux (Linux mascot) and group colored balls in similar formation.
- Simple fun!
- Single/Multi player Online play.
- GNU/GPL & available on most platforms as well as in Java.

Neverball



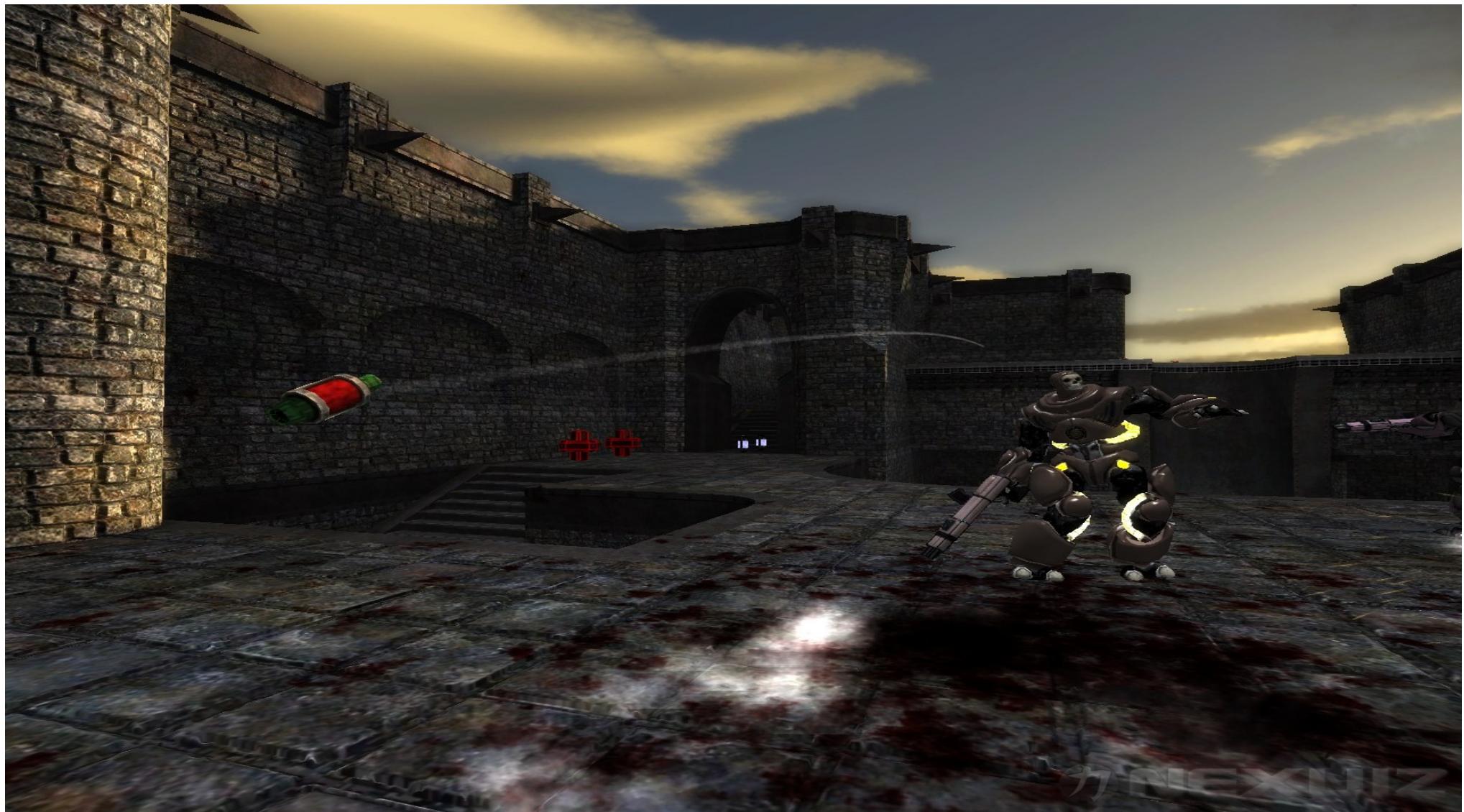
Neverball

- Neverball is a game where you battle the forces of gravity, moving platform & objects to collect coins and most importantly have fun.
- Part puzzle/part action game.
- Single player
- GNU/GPL & available on most platforms

FPS

First Person Shooters
- you shoot at stuff...

Nexuiz



Nexuiz

- **Nexuiz** is a intense, fast paced, futuristic first-person shooter.
- 9 weapons, 24 official maps and over 200 community maps.
- Very cool slick GUI. Think as cool as Quake or Unreal.
- GNU/GPL and available on most platforms.

Warsow



Warsow

- **WSW** is a fast paced cartoon like first person shooter which has a cyberpunk visual style.
- Supports common FPS game types.
- Single and multi-player options
- GNU/GPL except artwork/media & available on most platforms

Educational

Educational Games for all ages...
- you learn stuff whilst having fun

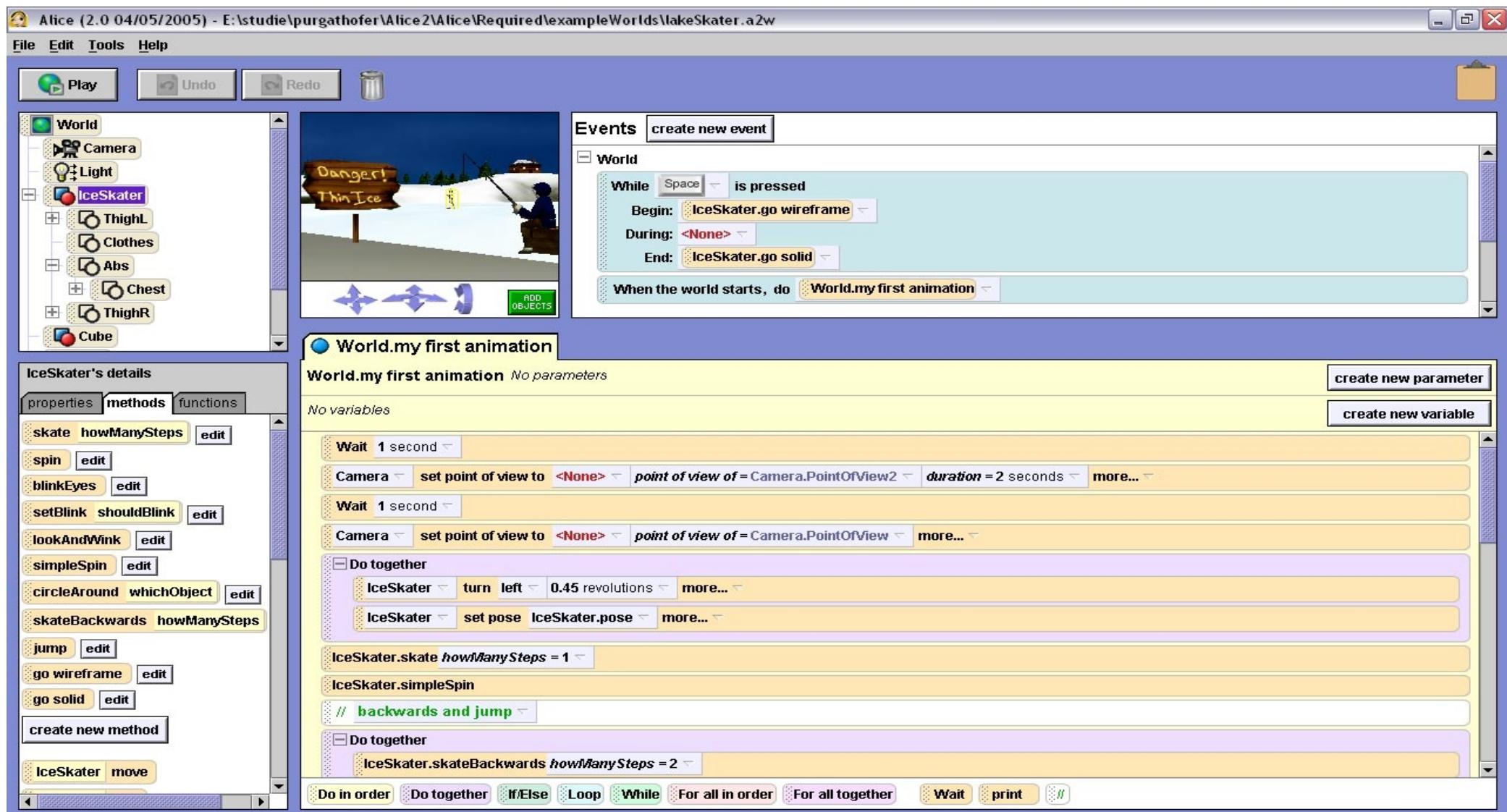
Stellarium



Stellarium

- Stellarium is a virtual planetarium of the sky in 3D. Displays stars, constellations, planets, nebula, ground and landscape.
- Nice easy to use GUI for navigation.
- Illustrates local deep space to 50 light years.
- GNU/GPL& available on most platforms.

Alice



Alice

- Alice is an educational 3D game environment that teaches programming to kids.
- Is a creative & engaging method of teaching programming fundamentals.
- Students learn by creating visual animations.
- BSD License & available on most platforms

Kids

Children's Games

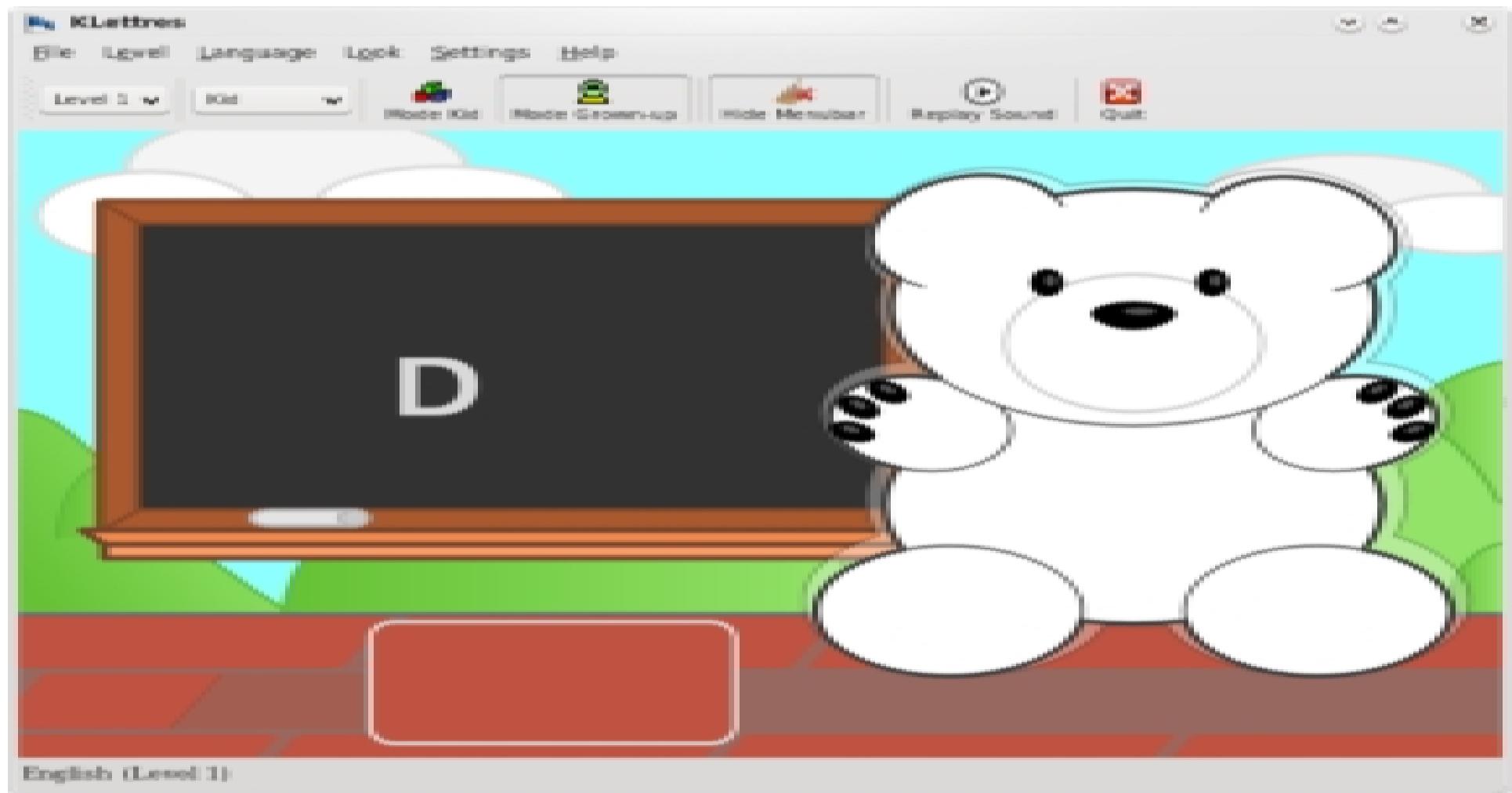
GCompris



GCompris

- GCompris is a collection of children's educational games (ages 2-10) with over 100 fun learning activities.
- Computer discovery, algebra, science, geography, general games (chess, memory, connect4, sudoku), reading, puzzles.
- Edugame edutainment
- GNU/GPL License & available on most platforms

KDE Educational Project



KDE Educational Project

- KDE Educational project is for kids (ages 3-18).
- Over 20 games in language, mathematics, science and general educational games.
- Edugame edutainment
- GNU/GPL, Available on most platforms and Windows with KDE 4.x.

Party/Fun

Ahh! YES!

StepMania



StepMania

- StepMania Is a arcade style dance/rhythm game.
- You “bust a move” on a dance pad to the tunes of your choice.
- Lots of community “mods”, songs, themes and other customizations.
- MIT License & available on most platforms

Frets on Fire



Frets on Fire

- Frets on Fire is a cool music game where you play virtual guitar.
- Supports many input devices such as keyboard, guitar controllers and joysticks.
- Hundreds of songs by the community and an editor for making your own.
- GNU/GPL code and other proprietary media & available on most platforms.

Chimpy says, “There are no FOSS games!”



?

How many FOSS games and game projects
are there?

There are no FOSS games!

- Sourceforge lists ≈32,000 games and game related projects.
- MobyGames (database the online encyclopedia of commercial games) lists ≈44,000 commercial games In the last 30 years.
- You would be hard pressed to not find dozens of FOSS games you love!
- Check out the links at the end of this presentation...

State of Linux desktop

Status and Survey

Linux Desktop

Abundant quality desktop options...

Linux Desktop Choices*

Top 15 according to Distrowatch.com

- Ubuntu
- OpenSUSE
- Linux Mint
- Fedora
- Debian
- Mandriva
- PCLinuxOS
- CentOS
- Sabayon
- Puppy
- Mepis
- Damn Small
- Slackware
- Arch
- Kubuntu
- And more...

BSD's too...

- PC-BSD
- Desktop BSD
- FreeBSD

Video/Sound Cards and Linux

- Drivers are improving but could be better.
- Hardware vendors are supporting us more than ever before.
- They will keep doing so if we let them know what we want!
- Open up a dialogue!

Hardware vendors

Linux users are an untapped market!

Survey

- An attempt to engage the assess the community perception of FOSS gaming.
- No real stats existed - so I did my own survey.
- Nearly 700 of you responded!
- Overwhelmingly positive response!

Survey Goals

- Galvanize our efforts.
- Improve awareness of FOSS games.
- Destroy some of the FUD and myths.
- Wake up commercial companies to our community.

Quick survey overview

- 95% properly identified FOSS and understand the concept.
- 83% play PC games
- 64% Consider Linux a gaming platform
- 95% Actively play FOSS games.
- 88% Agree that there are tons of FOSS games!

Example:

Richard Stallman is?

- A famous zoologist expert on the wilde beest = 0.73%
- The founder of the Free Software movement = 92.53%
- Guitar player in metal band Slayer = 0.44%
- One cool dude = 32.80%
- Don't know = 5.56%

Quick Survey Overview

- 77% Say DRM (Digital Restrictions Management) affects the purchasing decision of game.
- 90% Want to buy commercial games on Linux!
- 85% Would be more likely to buy a game title if it has a native Linux version.
- 60% Think that hardware vendors need to improve support for Linux.
- 59% Would play a FOSS game if it contained in game advertisements.
- 90% use Wine or other compatibility technology to play Windows games on Linux.

Survey results

- Will be available soon on my new FOSS gaming site soon.
- Podcast and FOSS gaming news.
- Looking for you to contribute to this community effort.
- Goal is to raise awareness of FOSS gaming, improve hardware, garner industry support.
- www.opengamingnow.com

Science of Gaming

Science & Value of Video Games

Why is the science of gaming important?

- Shortsighted misunderstanding of the medium and its potential.
- Misperception from overzealous community groups, politicians that games are responsible for the decay of our society.
- Understanding this scientific angle on gaming helps our community expand our perceived opportunities in the medium...
- Elucidates opportunities for us in the FOSS world.

Chimpy asks...



Who said this?

Video games are bad for you? That's what they said about rock and roll.

Interesting Quote

Video games are bad for you? That's what they said about rock and roll.

SHIGERU MIYAMOTO
Mario, Donkey Kong, Legend of Zelda

Gaming Benefits

- Video games can and do actually have a societal value and contribution.
- Training, simulation are strong points for games.
- Games are a learning/didactic tool.
- Businesses can use them for a variety of purposes such as training, sales, contests, etc.

Science behind Gaming

- Video games improve spatial capacities
- Video games improve visual attention skill
- Video games improve spacial acuity
- Video games sharpen visual skills
- Video games can reduce stress
- Second Life can improve real life social skills
- Video games improve visual processing
- Video games improve gamer's problem solving, scientific thinking

Ronny was totally a 1337 gamer!



Video Games as an

Educational tool

Educational Examples

- **Re-mission** by HopeLabs (not open but a good example.)
- FPS (First Person Shooter) which is designed to help kids with cancer better understand their illness.
- **Alice** is an educational 3D game environment that teaches programming to kids.

Military Examples

- SoftWARe - reduces training costs, improves effective social, spacial and cognitive skills.
- Nearly every branch of the military is using it.
- Delta3D Engine
- DARWARS
- Most importantly it saves lives.

Medical/Science Examples

- Highly cost effective, safe and realistic methods of presenting very abstract concepts.
- **SOFA** Is an open medical simulation project.
- **SPRING Surgical Simulator** is an open source surgical simulator.

Games 4 Business

- Games can be used to train, sell, advertise, educate, engage customers, evangelize, etc.
- Burger King for Xbox “Sneak King” produced a 40% quarterly profit jump.
- Sun Microsystems “Rise of the Shadow Specters” educates new employees.
- Harvard Business School/Forio teaches teamwork and leadership via [Everest simulation](#).

Gaming

Industry Facts and Open Source Opportunities

And now for

Near-death by sadistics*

*Sadistics – painful over exposure to statistics.

Gaming Industry Facts

- Most estimate nearly \$10 billion market it the U.S. alone.
- According to NDP Group, Console and portable software sales: \$6.2 billion, console and portable hardware and accessory sales: \$3.7 billion, PC game sales: \$1.1 billion in 2007.
- >100 million gamer worldwide as of 2005.
Deutsche Bank Alex Brown.

Gaming Industry Facts

- According to Terranova: In 2007, the combined GDP of virtual worlds was larger than the GDP of several countries, including Syria, Lebanon, Latvia, and Sri Lanka.

Open Source's Industry Impact

In nearly every space Open Source has had a tremendous impact...

FOSS Gaming

A few key contributions relating to our highlighted games....

id Software

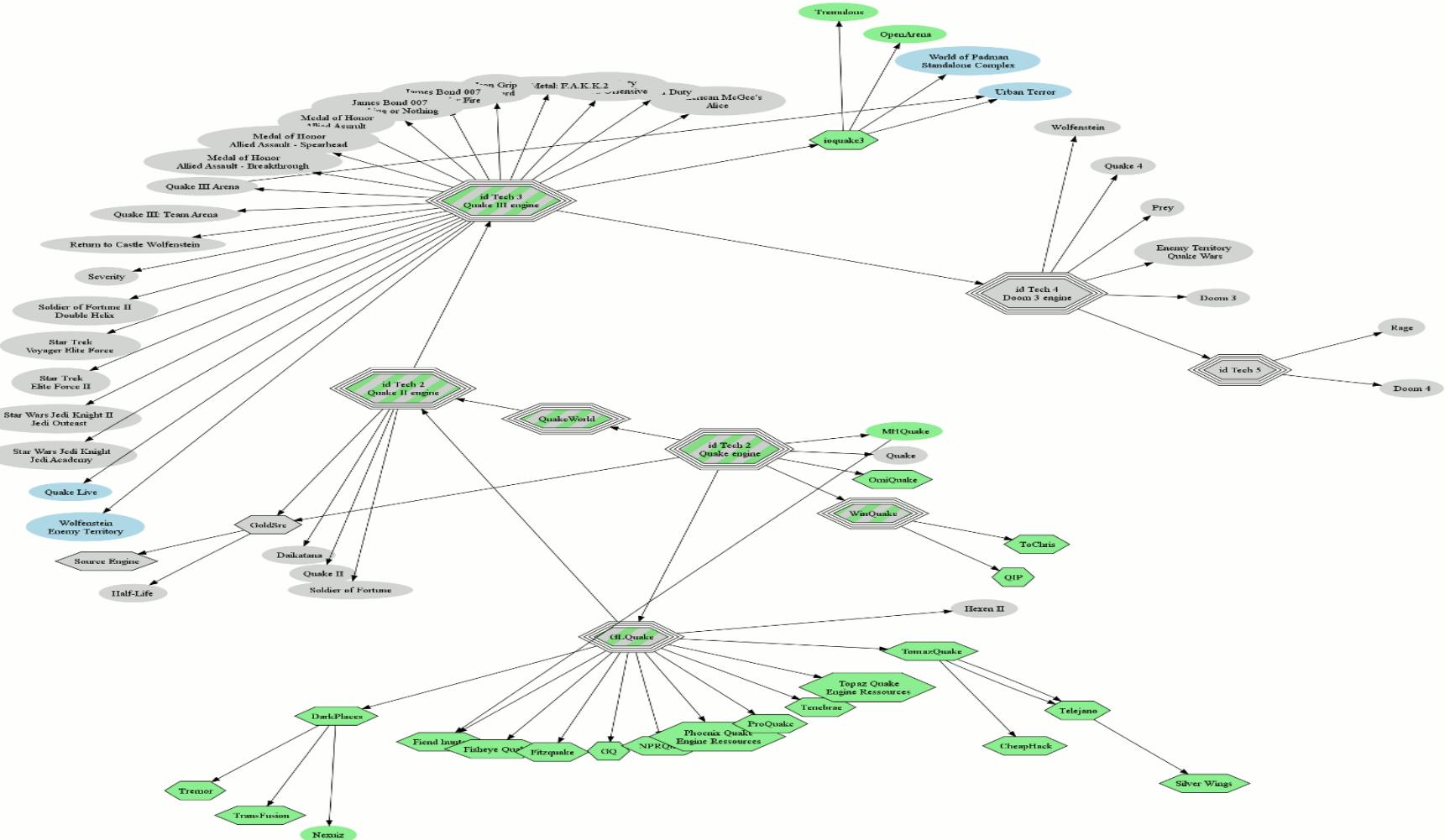
- Founded 1991 by John Carmack (Lead Programmer), John Romero (Programmer), Tom Hall (Game Designer), Adrian Carmack (artist).
- Amazing powerhouse of innovation in the gaming industry. HUGE contribution to Open Source.
- Licensed its core engine (Keen, Wolfenstein, Doom, Quake, Quake II, Quake III) to other game producers.
- <http://www.idsoftware.com/>

id Software

- John Carmack open sourced all major engines under GPL.
- Future releases will be made FOSS after 5 years.
- id spurred innovation in gaming and especially in the FOSS space.
- Thank you ID Software!

Quake Family Tree

Can you read this?



Quake Family Tree - Green=FOSS

Other major commercial contributions

- 3D Realms
- Sun Microsystems
- Ubisoft
- Activision
- Raven Software
- Google
- Maxis
- EA Games

Open Source Gaming Industry

Why are there no blockbuster Open games?

Industry Economics/OSS Barriers

- Game development is costly and time/labor intensive endeavor. General estimates for commercial games are around \$1 million and up and 2-3 years.
- Rockstar Games, Leslie Benzies says that Grand Theft Auto IV had over \$100 million development costs.
- Software is free but there are real costs for creating it.
- FOSS projects have to be financially sustainable.

Industry Barriers - Hardware

- Many commercial hardware vendors don't see us as a market.
- Drivers...
- Survey highlighted our communities desire for improved hardware support.

Industry Economics/Oss Barriers

- Popularity of commercial development tools, languages and engines...
- Prevalence of closed consoles...
- Lack of consumer & industry understanding of FOSS
- FOSS community isn't always good at getting the news out there....

?

How many of you want to see more FOSS
games and or more commercial games on
Linux?

FOSS Gaming Economics

- For these projects to thrive they need capital (money).
- There are very real costs to producing, distributing software.
- Capitalism supports FOSS every day so why not in games.
- My concern is sustainability!

FOSS Gaming Economics

- Unlike many other FOSS areas where revenues can be garnered by:
- Support
- Development
- Ecosystem of symbiotic business relationships,etc.
- FOSS games don't always have the same revenue streams.

Sustainable FOSS Gaming Business Models

- In this marketplace there are many creative avenues to revenue generation.
- Don't have to necessarily sell a game to make \$\$\$

Sustainable FOSS Gaming Business Models

- Make it easier to donate!
- Project sponsorship
- In game advertisements
- Free game - paid content (second life)
- Commercial add-ons
- Monthly subscription for online game play
- Commercial sponsorship
- Product placement
- Product promotions
- Shwag (t-shirts, mugs, pens, etc.)
- Development contests

Chimpy asks..



What musician was featured in the game Quake? What is it an example of in marketing terms?

Commercial Games on Open Platforms

- Traditionally large commercial game companies have ignored Open Source community.
- We represent a market opportunity for these companies.
- We want to buy their games on our OS.
- My survey highlighted this in great detail!

Commercial Games on Open Platforms

- Commercial companies like id software, Raven Software, Epic Games, Oddlabs, Frictional Games, Introversion Software, Greenhouse, Bioware, Linux Game Publishing, Runesoft, Hothead Games, Wolfire
- Support these companies!
- Vote with your \$\$\$'s!

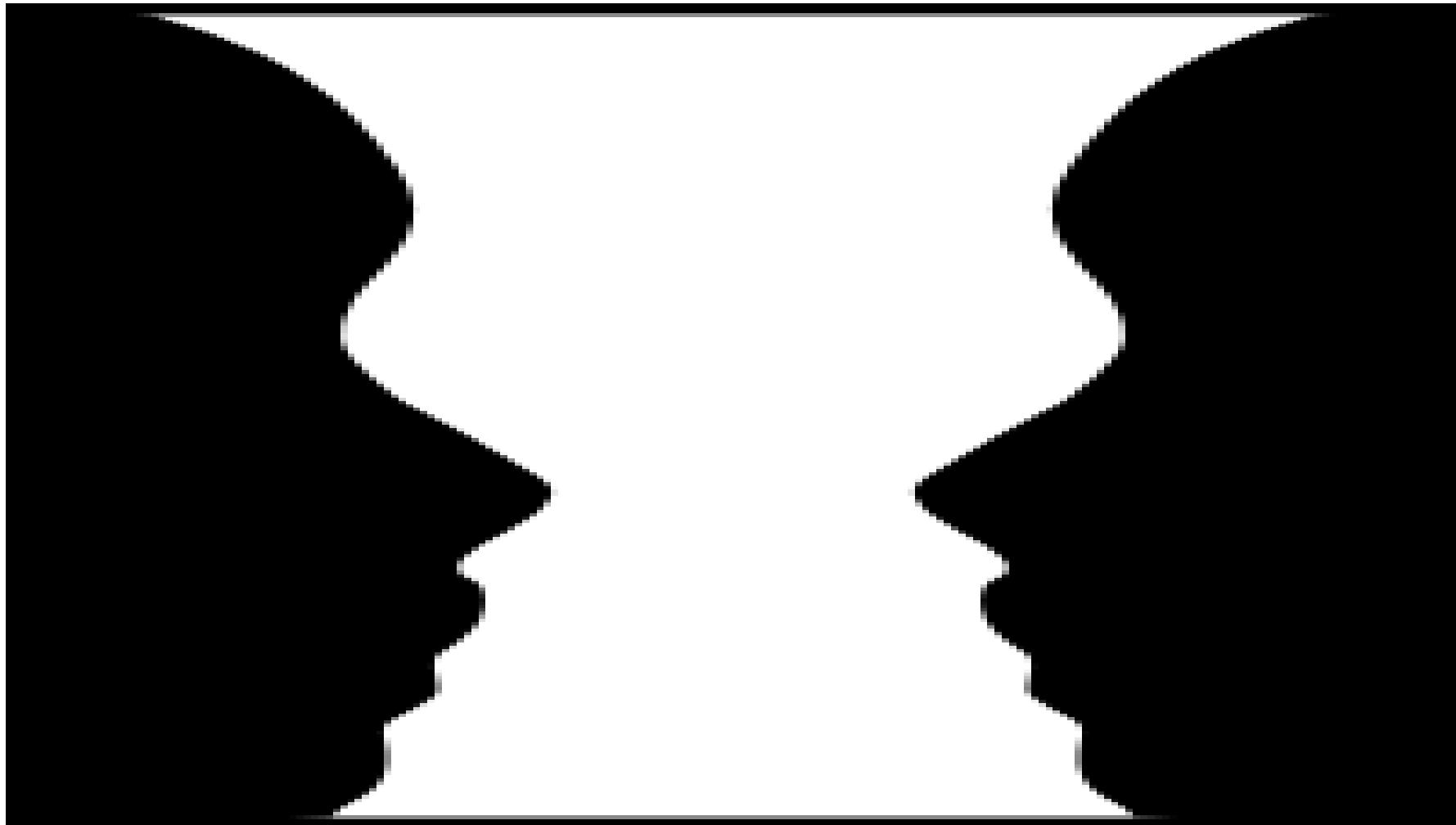
Commercial Game Co's Supporting Linux means sales

- Offering Linux version of a game can mean sales for game companies.
- **Wolfire** - “Supporting Mac OS X and Linux directly increased sales by around 122%.”
- **TribalTrouble**: Direct online sales - 47% OSX, 31% Windows, 11% Linux

Wolfire

- Wolfire is an independent game company that develops games for Mac OS, Windows and Linux.
- Current titles include **Lugaru** (pronounced Loo-GAH-roo) and the forthcoming **Overgrowth**.
- Strong supporters of Linux.
- Jeff Rosen co-president is offering free copy of the game Lugaru for all of us at SCALE.
- <http://www.wolfire.com/scale>

What is this?



Often

Foreseen limitations are a function of our perception.

So...

What can we do as a community

Get involved in FOSS Gaming

- Join a FOSS game project
- So many ways to contribute (applies to individuals or as corporations)
- Code, document, evangelize, advocate, donate, test, design, etc.
- Pick something and have a go at it!

Ways to get involved...



www.wordle.net

As a FOSS Community we should welcome new users

- Be an advocate not an @\$\$hat!
- Be welcoming, considerate, kind to all users at all levels. Remember, you started somewhere!
- Enough of the condescending, rude and immature behavior.
- Mentor, don't castigate!

Make changes in the Industry

- Only if we the customers demand products from the industry will they magically appear.
- Talk to the companies that need improvement, open a dialogue. Tell them what you think!
- Find out the C levels, product manager, marketing manager and tell them you want Linux support!
- BUY hardware, commercial Linux games from the companies that support our community!

Connect outside our community

- Connect outside FOSS world with other communities.
- FOSS communities need to go OUTSIDE of the hard-lines of our defined community.
- Introduce everyone to FOSS and the many AMAZING games!

Connect within the FOSS Community

- A community is only as strong as its ties.
- Lets work together and amplify our efforts.

Remember

“Be the change you want to see in the world.”

Gandhi

In conclusion

- There are TONS of amazing FOSS games.
- Multitudinous ways for you as an individual or company to get involved.
- Hardware & commercial games picture will improve with our active involvement.
- FOSS Gaming has an exciting future!

Thanks to..

- All the FOSS game programmers, graphic artists, animators, artists, sound editors, etc. who make these great games possible.
- The entire FOSS community
- **SCALE**
- The conference sponsors
- **Wolfire games**
- **Apress**
- **No Starch Press**
- **YOU!**

Finding FOSS games

Tons in every gaming genre...
So go play already!

Game Links Galore

- Wikipedia List of Open Source Games
- List of Open Source Games
- Sourceforge Games
- Libre Game Wiki
- Dmoz Directory - Open Source Games
- Google - Open Source Games

FOSS Game Sites

- www.linuxgames.com
- www.tuxgames.com
- www.libertatedgames.com
- www.happypenguin.org
- www.linuxgamingworld.com

Funny Game Links

- 50 Worst Game Titles Ever
- 30 Dumbest Video Game Titles Ever
- Some funny video games

Don't have Windows but want Win32 games?

- Wine - Windows games on Linux
- TransGaming Cedega
- Codeweavers Crossover Games
- FreeDOS - DOS old skool games on Linux
- Almost any virtualization solution such as VMWare, Xen or Virtual Box.

Video Game Science

- Video games improve spatial capacities
- Video games improve visual attention skill
- Video games improve spacial acuity
- Grand Theft Childhood
- Reality Bytes: Eight Myths About Video Games Debunked

Feel free to contact me

Connect on social networks

www.evolutionaryit.com

Also check out my up-and-coming podcast
at www.opengamingnow.com