

VIRTUAL WORLDS

CE317/CE817 - VIRTUAL WORLDS

LECTURE 1/10

14 JAN 2025

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INTRODUCTION

- THIS IS THE **FIRST** CE317/CE817 OF THE YEAR
- THIS MEANS I GET TO START YOU OFF WITH THE NICE-AND-EASY **BASICS**
 - DON'T WORRY, I WHACK YOU WITH **HARD** STUFF LATER IN THE MODULE
- **FIRST**, THOUGH, I HAVE TO DO SOME BORING **META-LECTURE** STUFF
 - BUT HEY, YOU'VE NOT FOUND THE ROOM YET ANYWAY
- SO, A FEW WORDS ON HOW THIS MODULE IS **ORGANISED...**

META-STUFF

- CE317/CE817 TAKES PLACE OVER THE COURSE OF **ONE** TERM
 - JUST AS WELL, AS THERE'S ONLY ONE TERM **LEFT**
- IT CONSISTS OF **10** STRAIGHT **LECTURES**, **9** **CLASSES** AND **1** **LAB** (ON THURSDAY!)
 - THE CLASSES ARE ON **MONDAYS**, THOUGH
- I'LL **TRY** TO KEEP THE LECTURES TO TIME, BUT SOME ARE QUITE **LONG** AND MAY HAVE TO BE FINISHED IN THE FOLLOWING CLASS
 - TODAY I JUST SPEAK REALLY **FAST** NEAR THE END....

WHERE TO FIND STUFF

- .PDFS OF THE LECTURE **SLIDES** WILL GO ON **MOODLE** AS **CE317** CONTENT (**NOT** CE817!)
 - ONLY BECAUSE I **HAVE** TO PUT THEM ON MOODLE
 - I **HATE** MOODLE
- MOST OF THE CLASSES ARE **DISCUSSIONS** OF ASSORTED **TEXTS**
- I'LL PUT THESE TEXTS IN MOODLE **BEFORE** THE CLASS SO YOU CAN LOOK THROUGH THEM
 - HAVE THEM **HANDY** FOR THE CLASS ITSELF
 - **EXPECT** TO **PARTICIPATE** IN THE CLASSES!

ASSIGNMENT

- THERE IS **ONE** ASSIGNMENT, WORTH **20%**
- IT'S A **WRITTEN** ONE, SET IN WEEK **21**
 - YOU'LL **BASICALLY** BE ASKED TO WRITE A **NARRATIVE** THAT FITS A **TEMPLATE**
- THE **DEADLINE** IS IN WEEK **24** (14TH MARCH)
AT 1 SECOND TO 2PM
 - CHECK AND BELIEVE **FASER** THOUGH
- YES, YOU **WON'T** HAVE **LONG** TO WRITE IT...
- BECAUSE SOME PEOPLE HAVE SPLDS, NO-ONE WILL **LOSE** MARKS FOR LOUSY SPELLING/GRAMMAR

AH YES...

- **SPEAKING** OF WHICH, THOSE OF YOU WHO DIDN'T DO **CER17** NEED TO BE AWARE OF A **TECHNICAL** TERM
- THERE'S A TRICKY **WORD** WE USE A **LOT** IN COMPUTER GAMES THAT YOU **MUST** BE ABLE TO SPELL
- THAT WORD IS **LOSE**
- IT'S NOT **LOOSE**, IT'S **LOSE**
 - LIKEWISE LOSING, LOSER, LOSES, LOSS, ...
- IF YOU SPELL IT **LOOSE** IN ANYTHING THAT I MARK, YOU WILL **LOSE** MARKS
 - **LITERALLY**, I'LL KNOCK A PERCENTAGE POINT OFF FOR IT
- AS IT'S A TECHNICAL TERM, DYSLEXIA IS **NO DEFENCE**

OH, ABOUT THE EXAM...

- EXAMS THIS YEAR ARE **IN-PERSON**
 - SORRY, CHATGPT FANS
- HOWEVER, BECAUSE THE UNIVERSITY WANTS YOU TO **PASS**, ALL EXAMS ARE NOW SOME VARIETY OF **OPEN BOOK**
- FOR CE317 AND CE817, THIS MEANS:
 - “This exam is Open Book (Restricted), students may bring/use the following in the exam:
 - Study Notes (up to 6 double-sided A4 pages)”
- SO **MAYBE** YOU SHOULD TAKE SOME NOTES...

FINAL META

- **FINALLY**, BEFORE WE START THE LECTURE PROPER...
- AGAIN AS WITH CE217, CE317/CE817 IS A MODULE ABOUT **COMPUTER GAMES**
- I EXPECT YOU TO **KNOW** SOMETHING ABOUT THESE
- I **WILL** BE MENTIONING GAMES BY NAME WHILE I LECTURE, PARTICULARLY **MMOS** (VIRTUAL WORLDS)
- I **WILL** BE MENTIONING **OTHER** GAMES AND GENRES
- I WILL **NOT** BE EXPLAINING THEM
 - **LOOK THEM UP** IF YOU DON'T KNOW WHAT THEY ARE
- FORMALLY: IT'S REQUIRED **BACKGROUND** READING

LET US BEGIN...

Further, web3 solutions cause new problems for a metaverse platform without adding any value. Richard Bartle, the game industry's most respected expert on virtual worlds, recently wrote an essay on my blog where he recounted his futile attempts to explain this to web3 advocates.

- *MAKING A METAVERSE THAT MATTERS*. WAGNER JAMES AU (2023)

VWS...

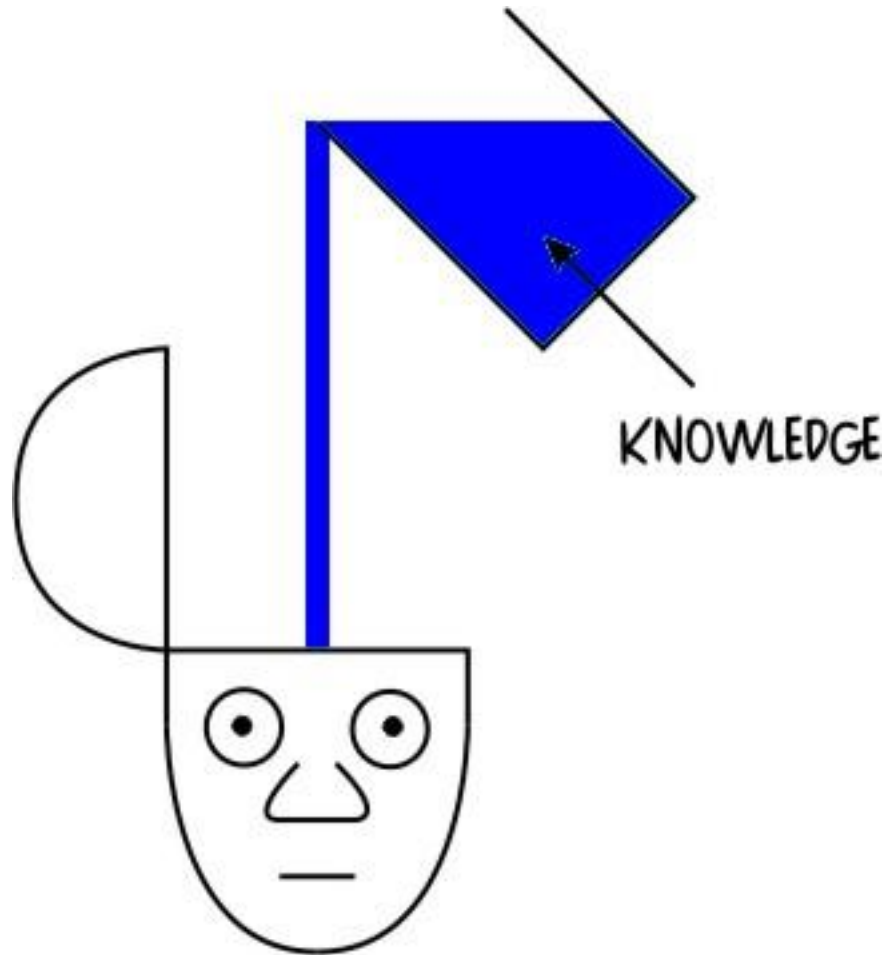
- SO, OFF WE GO WITH THE ACTUAL **LECTURE**
- THE **TOPIC** OF THIS MODULE IS **VIRTUAL WORLDS**, WHICH IN **PRACTICE** MAINLY MEANS **MMORPGS**
 - OR **MMOS** FOR SHORT
- **WARNING:** I KNOW **MORE** ABOUT THIS SUBJECT THAN **ANYONE ELSE**
- **FURTHER WARNING:** THIS MODULE IS ALL ABOUT **THINKING** AND **UNDERSTANDING**
- THIS IS WHERE YOU GET **EDUCATED** RATHER THAN **TRAINED**

DIFFERENCE

- **TRAINING:** ACQUISITION OF SKILLS AND KNOWLEDGE AS A RESULT OF BEING **TAUGHT**
 - OFTEN FOCUSED FOR A PARTICULAR **VOCATION**
- **EDUCATION:** ACQUISITION OF SKILLS AND KNOWLEDGE AS A RESULT OF **LEARNING**
 - AIMS FOR A MORE ROUNDED, **THINK-FOR-YOURSELF** IDEAL
- THE DIFFERENCE BETWEEN EDUCATION AND TRAINING WAS BEST SUMMED UP BY **PLUTARCH** (GRECO-ROMAN, 46-120AD)

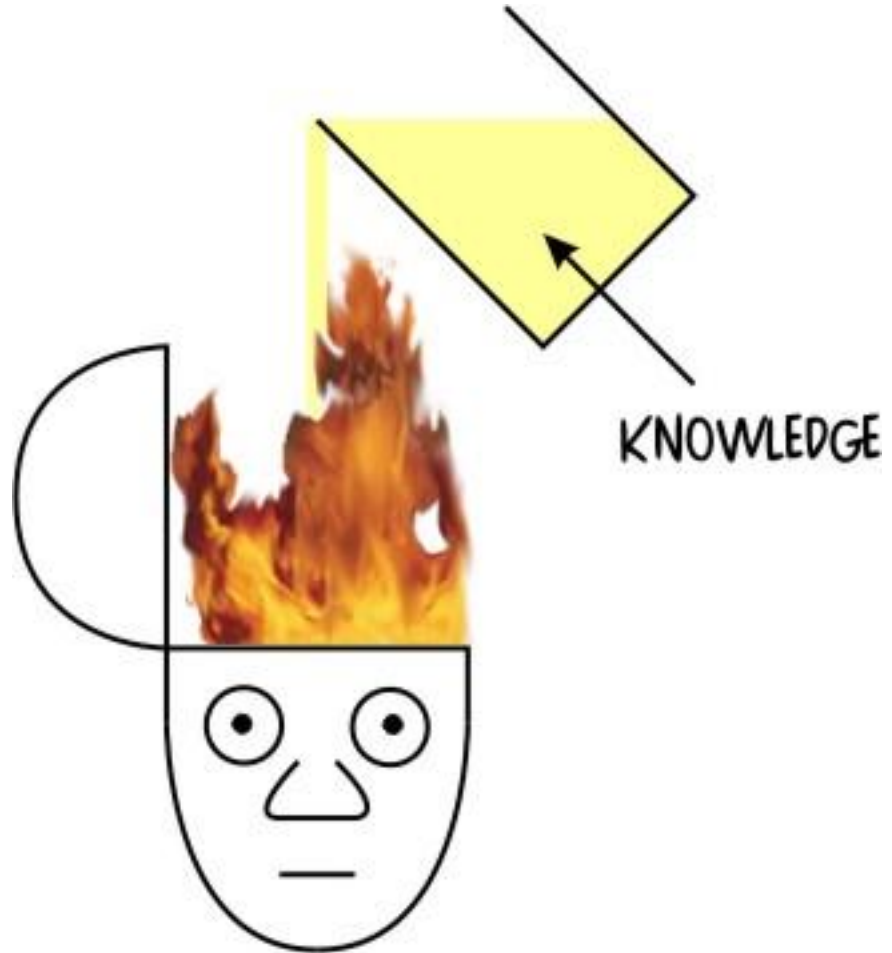
TRAINING

- VESSEL TO BE FILLED
- TRAINING IS PREPARATION **AGAINST** SURPRISE



EDUCATION

- FIRE TO BE KINDLED
- EDUCATION IS PREPARATION **FOR** SURPRISE



DEFINITION...

- SO, HAVING **SCARED** YOU WITH THAT, LET'S HAVE SOME ACTUAL **CONTENT**...
- THE FIRST THING WE NEED IS A **DEFINITION** OF THE TERM "**VIRTUAL WORLD**"
- THE "**WORLD**" PART IS EASY: IT'S AN **ENVIRONMENT** THAT THE **INHABITANTS** OF WHICH REGARD AS BEING **SELF-CONTAINED**
 - "THE ROMAN WORLD", "THE WORLD OF HIGH FINANCE", "THE WORLD OF HARRY POTTER"

...DEFINITION

- AS FOR "**VIRTUAL**", THAT'S MEANT IN THE SENSE THAT **PHYSICS** (OPTICS) USES IT:
 - REAL: THAT WHICH **IS**
 - IMAGINARY: THAT WHICH **ISN'T**
 - VIRTUAL: THAT WHICH **ISN'T**, HAVING THE **FORM OR EFFECT** OF THAT WHICH **IS**
- VIRTUAL WORLDS ARE **PLACES** WHERE THE **IMAGINARY** MEETS THE **REAL**
 - WE'D HAVE **LIKED** TO HAVE CALLED THEM VIRTUAL **REALITIES**, BUT THAT'S AN **INTERFACE** CONCEPT

CONDITIONS

- TOO MANY **VARIED** THINGS FIT THIS DEFINITION FOR IT TO BE VERY **USEFUL** BEYOND MERE LABELLING
- WE NEED A MORE **DETAILED** DEFINITION IF WE ARE TO **HOME IN** ON THE **PARTICULAR** SUBSET THAT IS OF SPECIAL INTEREST
- THERE **IS** AN ACTUAL **EXPERIENTIAL** STEP CHANGE BETWEEN A VIRTUAL WORLD AND A NEARLY-BUT-NOT-QUITE VIRTUAL WORLD
 - IT'S **NOT** A CONTINUUM WITH LOTS OF BORDERLINE CASES
- WHEN THE **RIGHT** CONDITIONS COME TOGETHER, SOMETHING ALTOGETHER **NEW** EMERGES

CRITERIA 1

- SO, TO **QUALIFY** AS A VIRTUAL WORLD, A CANDIDATE SYSTEM MUST SATISFY **SIX** CONDITIONS:
- 1) IT MUST HAVE UNDERLYING, AUTOMATED RULES THAT ENABLE PLAYERS TO EFFECT **CHANGES** TO IT – ITS **PHYSICS**
 - CHAT ROOMS FAIL AS THEY HAVE NO PHYSICS
- 2) PLAYERS REPRESENT **SINGLE** INDIVIDUALS “IN” THE WORLD THROUGH WHICH THEY ACT – THEIR **CHARACTER**
 - STRATEGIC WARGAMES FAIL AS A PLAYER DOESN'T ACT THROUGH ONE CHARACTER

CRITERIA 2

- 3) INTERACTION TAKES PLACE IN **REAL TIME**
 - TURN-BASED RPGS FAIL BECAUSE THEY PAUSE BETWEEN ACTIONS
- 4) THE WORLD IS **SHARED**
 - SINGLE-PLAYER GAMES FAIL BECAUSE THEY'RE NOT SHARED
- 5) THE WORLD IS **PERSISTENT**
 - FIRST-PERSON SHOOTERS FAIL BECAUSE THEY'RE NOT PERSISTENT
- 6) THE WORLD IS **NOT REALITY**
 - REALITY FAILS BECAUSE IT **IS** REALITY...
- EXERCISE: WHY WOULD *DUNGEONS & DRAGONS* FAIL?

HERITAGE

- IN **PRACTICE**, YOU CAN NORMALLY TELL WHAT IS OR ISN'T A VIRTUAL WORLD BY LOOKING AT ITS **HERITAGE**
- IF ITS DESIGN DRAWS HEAVILY ON AN **EXISTING** VIRTUAL WORLD, IT PROBABLY **IS** ONE; IF **NOT**, IT PROBABLY **ISN'T**
- THIS DEFINITION DOES OF COURSE MEAN YOU NEED TO IDENTIFY SOME **PROGENITOR** VIRTUAL WORLDS AS A STARTING POINT
- THIS BRINGS US TO THE SUBJECT OF VIRTUAL WORLD **HISTORY**, AND MUCH SELF-AGGRANDISEMENT BY ME

MUD

- MUD, ROY TRUBSHAW & RICHARD BARTLE, 1978

Narrow road between lands.

You are stood on a narrow road between The Land and whence you came. To the north and south are the small foothills of a pair of majestic mountains, with a large wall running round. To the west the road continues, where in the distance you can see a thatched cottage opposite an ancient cemetery. The way out is to the east, where a shroud of mist covers the secret pass by which you entered The Land. It is raining.

*w

Narrow road.

You are on a narrow east-west road with a forest to the north and gorse scrub to the south. It is raining. A splendid necklace lies on the ground.

*

- THIS IS A **MOCK-UP** OF WHAT THE SCREEN LOOKED LIKE, BECAUSE IN 1978 WE **HAD NO SCREENS...**

WE HAD TELETYPES



- HERE'S A **PRINTOUT** OF A 1980 MUD LOG...

LOGGING MUD ON 15TH OCTOBER 1980 AT 14:54:22

*SCORE

YOUR SCORE SO FAR IS :

STRENGTH=51, STAMINA=85, DEXTERITY=37

WEIGHT CARRIED=0 (MAX. WEIGHT=510000G)

MAXIMUM STAMINA=85

IF YOU QUIT NOW YOUR LEVEL OF EXPERIENCE WOULD BE NOVICE

GAMES PLAYED TO DATE 1

*WIZARD MODE

*SORCERY

WELCOME ON MASTER!

ROOM PATH

PATH:

YOU ARE STANDING ON A PATH WHICH LEADS OFF A ROAD TO THE NORTH, TO A COTTAGE SOUTH OF YOU. TO THE WEST AND EAST ARE SEPARATE GARDENS.

ROOM HALL

HALL:

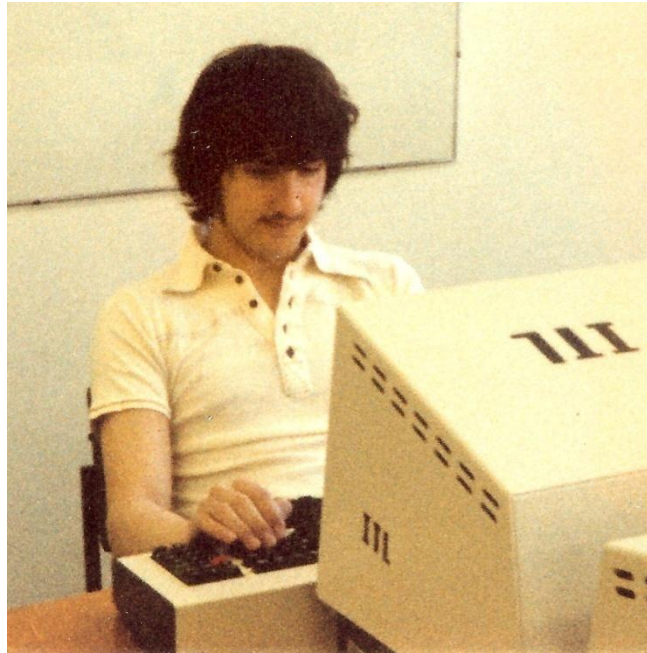
YOU ARE STANDING IN AN ODDLY SHAPED HALL. TO THE SOUTH IS A DOORWAY. TO THE EAST IS, AN ARCHWAY AND SOME DARK FORBIDDING STAIRS LEAD UPWARDS TO THE SOUTHEAST. IMMEDIATELY TO THE WEST IS A FITTED WARDROBE, AND SOME TERRACOTTA GRANITE STEPS TO THE SOUTHWEST LEAD DOWNWARDS TO THE CELLAR. THE KITCHEN DOOR IS LOCKED SHUT.

GENESIS

- THE STORY OF VIRTUAL WORLDS **FORMALLY** BEGINS SOME TIME IN THE WEEK 16TH TO 20TH OCTOBER, 1978
 - PROBABLY THE FRIDAY
- **HERE** AT THE UNIVERSITY OF ESSEX, A SECOND-YEAR CS UNDERGRADUATE CALLED **ROY TRUBSHAW** WROTE A SHORT PROGRAM HE CALLED **MUD**
 - *MULTI-USER DUNGEON*
- THIS **FIRST** VERSION WAS JUST TO TEST THE **TECHNOLOGY** HE NEEDED
- HE **IMMEDIATELY** STARTED WORK ON VERSION 2, WHICH WAS **PLAYABLE** BY DECEMBER

1978

- HERE'S A **PICTURE** OF ROY WORKING ON *MUD* IN 1979/80



- I CAN TELL IT'S FROM THEN BECAUSE HE'S SITTING AT A **MONITOR** RATHER THAN AT A **TELETYPE** OR A **CARD PUNCH**...

MY PART

- **I** GOT INVOLVED EARLY, DOING CONTENT DESIGN
 - NOT THAT IT WAS **CALLED** THAT BACK THEN...
- VERSION 2 WAS WRITTEN IN **MACRO-10** ASSEMBLER, WHICH MEANT IT GOT VERY **UNWIELDY**
- IN LATE 1979, ROY FINALLY **SNAPPED** AND DECIDED TO REWRITE IT FROM **SCRATCH** AS VERSION 3
- HE USED THE LANGUAGE **BCPL**
 - THE LANGUAGE FROM WHICH THE LANGUAGE FROM WHICH **C** WAS DEVELOPED WAS DEVELOPED
- BY THEN HE WAS IN HIS **FINAL** YEAR, SO I TOOK CODE OWNERSHIP OF *MUD* OVER EASTER, 1980

AND THEN

- ALTHOUGH PEOPLE **HAD** PLAYED MUD VERSION 2 OVER WHAT-WOULD-BECOME-THE-INTERNET IN 1979, IT WAS VERSION 3 THAT **REALLY** CAUGHT ON
 - THIS VERSION CAME TO BE KNOWN AS **MUD1**
- PEOPLE **PLAYED** IT, **LIKED** IT, FIGURED THEY COULD DO THE SAME THING ONLY BETTER, AND SOME **DID** SO
- MORE PEOPLE PLAYED **THEIR** GAMES, THE **SAME** THING HAPPENED, AND IT SPAWNED AN **INDUSTRY**
- **NOW**, APPROACHING **50** YEARS LATER, ALMOST **ALL** VIRTUAL WORLDS ARE **DIRECT** DESCENDANTS OF MUD
- OK, SO THAT'S THE DRY, **FORMAL** STORY...

DR TODDYSTONE

- WHEN I WAS ABOUT **12**, I INVENTED THIS ...
WELL, IT'S HARD TO SAY **WHAT** IT WAS
 - I CREATED A **MAP** OF A LOST CONTINENT
 - I POPULATED IT WITH ALL KINDS OF EXCITING AND **INTERESTING** THINGS
 - I INVENTED A CHARACTER, **DR TODDYSTONE**
 - I MOVED DR TODDYSTONE **THROUGH** THE LOST CONTINENT A **DAY** AT A TIME
 - I WROTE A **DIARY** OF HIS DAILY ADVENTURES
- I USED THE FRAMEWORK OF A ROLE-PLAYING **GAME** TO CREATE **STORY** – FOR **FUN!**

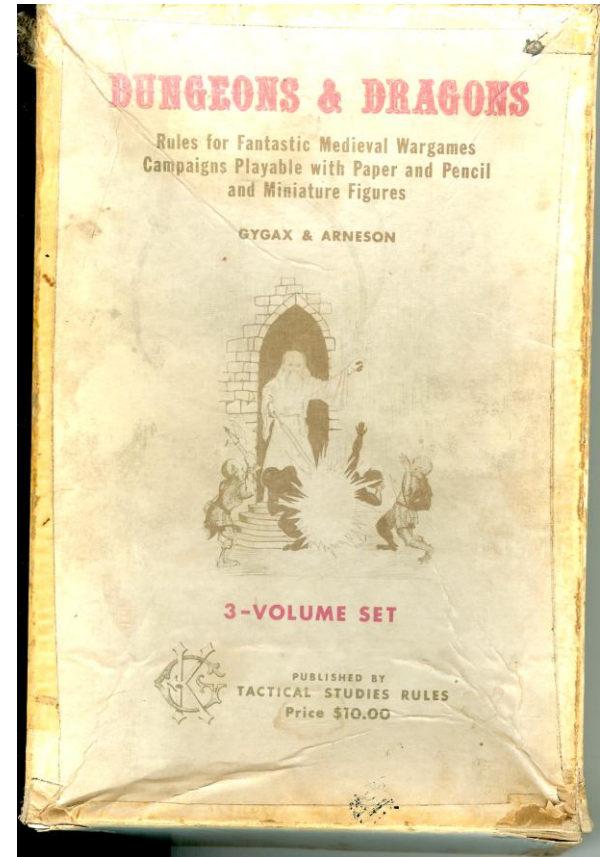
THE LORD OF THE RINGS



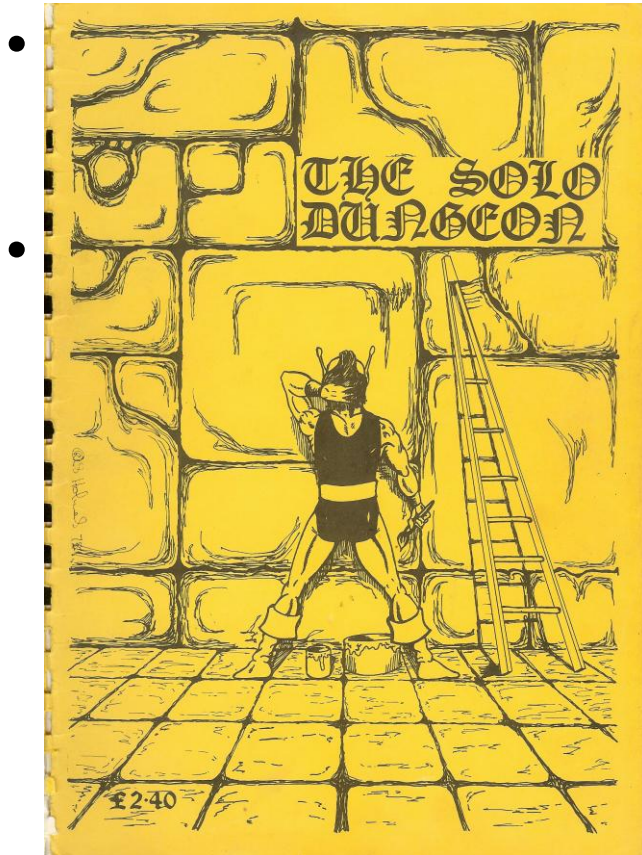
- I READ THIS **THREE TIMES** IN MY TEENS
- I LEARNED THAT YOU CAN BUILD A COMPLETELY **IMAGINARY**, YET **BELIEVABLE** AND ENTIRELY **SELF-CONSISTENT** WORLD

DUNGEONS & DRAGONS

- I PLAYED A **LOT** OF D&D IN 1976/1977
- BACK THEN, KIDS DIDN'T HAVE AS MUCH **HOMEWORK**, SO THEY GOT TO SPEND TIME DOING THINGS THEY **ENJOYED**
- D&D INTRODUCED SOME CONCEPTS I HADN'T **COME** ACROSS BEFORE, SUCH AS **LEVELS**



THE SOLO DUNGEON



THIS WAS MY FIRST
PUBLISHED GAME
IT WAS **AMONG** THE
EARLIEST "CHOOSE YOUR
OWN ADVENTURE GAMES"
IN THE UK

- UNLIKE ANYTHING **ELSE** AT THE TIME, IT WAS
OPEN-ENDED

ADVENT

- WELCOME TO ADVENTURE!! WOULD YOU LIKE INSTRUCTIONS?
Y
SOMEWHERE NEARBY IS COLOSSAL CAVE, WHERE OTHERS
HAVE FOUND FORTUNES IN TREASURE AND GOLD, THOUGH IT
IS RUMORED THAT SOME WHO ENTER ARE NEVER SEEN
AGAIN. MAGIC IS SAID TO WORK IN THE CAVE. I WILL BE
YOUR EYES AND HANDS. DIRECT ME WITH COMMANDS OF 1
OR 2 WORDS. I SHOULD WARN YOU THAT I LOOK AT ONLY
THE FIRST FIVE LETTERS OF EACH WORD, SO YOU'LL HAVE
TO ENTER "NORTHEAST" AS "NE" TO DISTINGUISH IT FROM
"NORTH". (SHOULD YOU GET STUCK, TYPE "HELP" FOR
SOME GENERAL HINTS. FOR INFORMATION ON HOW TO END
YOUR ADVENTURE, ETC., TYPE "INFO".)
- ROY TRUBSHAW PLAYED **ADVENT RIGHT** THE
WAY THROUGH
 - HE WAS THE **FIRST** AT ESSEX UNIVERSITY TO GET
THE **LAST** POINT

SETUWP

- ROY HAD WANTED ACCESS TO THE **INTER-PROCESS COMMUNICATION** ROUTINES OF ESSEX UNIVERSITY'S **PDP-10**
 - JUST TO **PLAY** WITH THEM
- HOWEVER, HE WAS **DENIED** THESE PRIVILEGES
- LOOKING FOR WAYS **ROUND** THE PROBLEM, HE CAME ACROSS **SETUWP**

```
RESET  
setz      1,  
setuwp    1,  
halt
```

MORE

- AS YOU CAN SEE, THERE'S LOTS **MORE** TO THE GENESIS OF *MUD* THAN THE DRY, FORMAL STORY MAKES OUT
- **SEVERAL** FACTORS HAD TO COME TOGETHER
- THERE WERE **REASONS** WHY TWO SEEMINGLY **RANDOM** STUDENTS FROM A PROVINCIAL UK UNIVERSITY CREATED WHAT, **UNBEKNOWN** TO THEM, WAS THE FIRST VIRTUAL WORLD
 - IT **DIDN'T** "JUST HAPPEN"
- AS TO WHAT THOSE REASONS **WERE**, WELL YOU'LL HAVE TO WAIT UNTIL LECTURE **10** TO FIND OUT...

BACK THEN

- ONE **LAST** THING BEFORE WE MOVE THE TIMELINE ON
- BACK IN 1978:
 - WE USED TELETYPES AND PUNCHED CARDS FOR **I/O**
 - THERE WAS **NO INTERNET**
 - THERE WAS NO **"FANTASY"** GENRE
 - THERE WERE **VERY FEW** COMPUTER GAMES
 - I'D **WRITTEN** MORE OF THEM THAN I'D PLAYED!
 - COMPUTERS WERE MUCH **LESS POWERFUL** THAN TODAY
 - THERE ARE 10K MORE BITS IN THAT **PHOTO** OF ROY TRUBSHAW THAN **MEMORY** HE HAD AVAILABLE TO WRITE *MUD*
 - 205K OF 8-BIT WORDS ~ 45K OF 36-BIT WORDS – WE HAD **35K**
- DON'T SUPPOSE THE PAST **IS** THE PRESENT

EXODUS

- OK, SO HAVING OUTLINED THE **EARLY HISTORY** OF VIRTUAL WORLDS, I'M NOW GOING TO LOOK AT THE **LATER HISTORY**
 - IN WAY TOO MANY SLIDES
- IMPORTANT: THIS **ISN'T** MERELY ME RAMBLING ON ABOUT WHAT HAPPENED 2 DECADES BEFORE YOUR BIRTH
- YOU NEED TO **KNOW** THE PAST SO YOU CAN **UNDERSTAND** THE PRESENT
- YOU NEED TO KNOW **WHY** THINGS ARE THE WAY THEY ARE
 - AND WHY THEY'RE **NOT** THE WAY THEY'RE NOT

FIRST AGE

- SO: THE **FIRST AGE** OF VIRTUAL WORLDS WENT FROM 1978 TO 1985
- THE **ONLY** VIRTUAL WORLDS AROUND WERE ONES WRITTEN FROM **SCRATCH**
 - OR INSTITUTION-BOUND LOOKALIKES
- NOTE THAT MUD WAS **NOT** THE ONLY OCCASION VIRTUAL WORLDS WERE INVENTED
 - EX-CE217 REMEMBER “GOLF WAS INVENTED IN CHINA”?
- VIRTUAL WORLDS WERE REINVENTED AT LEAST **FIVE** TIMES
 - SCEPTRE OF GOTH, AVATAR, ISLAND OF KESMAI, HABITAT, MONSTER
 - SEE NEXT SLIDE

OTHERS

- *SCEPTRE OF GOTH* (ORIGINALLY *E*M*P*I*R*E*)
 - ALAN KLIETZ, UNIVERSITY OF MINNESOTA, 1978
- *AVATAR*
 - BRUCE MAGGS, ANDREW SHAPIRA & DAVID SIDES, 1979
- *ISLAND OF KESMAI*
 - KELTON FLINN & JOHN TAYLOR, 1981
- *HABITAT*
 - RANDY FARMER & CHIP MORNINGSTAR, 1985
- *MONSTER*
 - RICH SKRENTA, NORTHWESTERN UNIVERSITY, 1989
- I HAVE **SCREENSHOTS** FOR SOME OF THESE...

KLIETZ

- OK, SO THIS **ISN'T** A SCREENSHOT, IT'S A CIRCA 1984 PHOTO OF ALAN **KLIETZ**, WHO WROTE *SCEPTRE OF GOTH*
- I'M **SHOWING** IT
GIVE YOU SOME
CULTURAL **CONTEXT**
 - ALSO TO MOCK HIS
HAIRSTYLE



SOG

- **THIS IS A SCREENSHOT**

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The Scepter of Goth Fantasy Role-Playing Game Version 3.12 (Run 1087)
Notice: That which was once ours is ours again and will never be taken from us!

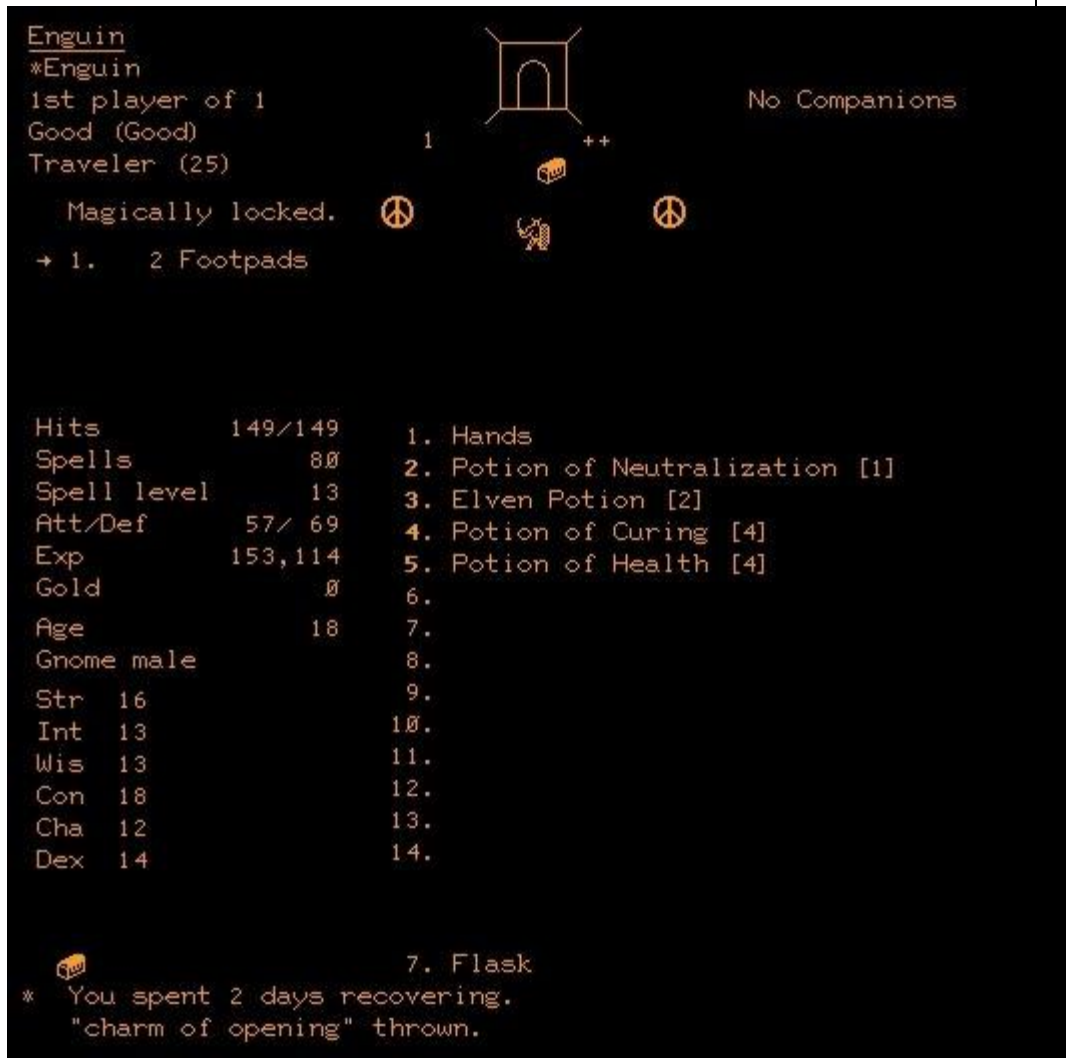
Enter your name (or 'quit'): Richard
Please select your character's class:
Fighter, Thief, Cleric, Paladin, Ranger, Magic-User or Lady.
Class? Paladin
Choose your character's attributes for strength, intelligence, dexterity, piety and constitution
Each must be between 5 and 18 and the average must be 11 or less (EG: 15,7,9,10,9)
Stats? 15,5,10,15,10
Which weapon is your most skillful?
Choose from: sharp, thrusting, blunt, or pole weapons
Skill? sharp
Finally, is your character a male or female? m
Character file updated.

Now entering the lands - type 'HELP' for help or 'QUIT' to quit.

### Please welcome Richard the Paladin.
You're standing in the busy marketplace of Town Square.
Obvious exits are south, east and west.
You see a charity chest, a welcome sign, a sparkling fountain and Town Hall.
Do? _
```

AVATAR

- AVATAR
- IS THIS THE FIRST GRAPHICAL VIRTUAL WORLD?
- ANSWER: IT'S **IMMATERIAL!**
- **NO** MODERN VIRTUAL WORLD IS DESCENDED FROM AVATAR



ASCII GRAPHICS

- ISLAND OF KESMAI HAD **ASCII** GRAPHICS

```
[ ][ ][ ][ ]- -[ ] orc  sword  shield  chain
[ ] A          S [ ] A Jennie.c
/   >   +++++ [ ] A 2 skeletons
[ ]      +++++ [ ] B trolls
[ ] B          dn [ ]
[ ][ ][ ][ ][ ][ ][ ]
```

Swing hits with moderate damage

Skeleton is slain

Orc is blocked by your armour

Troll: kia ardata luuppatar ne

>throw bottle at troll

R mace	Hits	Hits On	Stamina	Exper.	M.	Pnts.
L bottle	35	5	10	6523		9

- THEY WERE *primitive*, BUT THEY WERE STILL **GRAPHICS...**

HABITAT

- HABITAT WAS A **SOCIAL** VIRTUAL WORLD
- COMMERCIAL – LUCASARTS/FUJITSU
- TOO **SPECIFIC** TO COMMODORE 64S TO INSPIRE OFFSPRING
- NOW **REBUILT** AS A MUSEUM PIECE
 - [HTTP://NEOHABITAT.ORG](http://neohabitat.org)



MORNINGSTAR & FARMER

- HERE IS THE **TEAM** BEHIND *HABITAT*



ARIC WILMUNDER (ARTIST, CLIENT PROGRAMMER), CHIP MORNINGSTAR (DESIGNER, PROJECT LEAD), JANET HUNTER (BACK END PROGRAMMER), RANDY FARMER (DESIGNER, SERVER PROGRAMMER)

SECOND AGE

- THE SECOND AGE (1985-1989) BEGAN WHEN PEOPLE WERE **INSPIRED** BY **FIRST-AGE** VIRTUAL WORLDS TO WRITE THEIR **OWN**
- THIS **MAINLY** (BUT NOT EXCLUSIVELY) HAPPENED WITH MUD, BECAUSE IT WAS **NON-COMMERCIAL**
- WE **ENCOURAGED** PEOPLE TO WRITE THEIR OWN VIRTUAL WORLDS
 - SCEPTRE OF GOTH AND ISLAND OF KESMAI BOTH **DISCOURAGED** IT, THE FORMER UNSUCCESSFULLY SO
 - AVATAR **ALSO** ENCOURAGED IT BUT COULDN'T ESCAPE THE CONFINES OF PLATO

PROGENY

- THERE **HAD** BEEN SOME MUD LOOKALIKES WRITTEN USING THE MUD SYSTEM ITSELF
 - IN ROY'S MUD-DEFINITION LANGUAGE, **MUDDL**,
 - I WROTE A SHELL DATABASE IN IT TO HELP OTHER DESIGNERS
- BEGINNING IN 1985, SEVERAL **INDEPENDENT** VIRTUAL WORLDS WERE WRITTEN BY **PLAYERS** OF MUDI
- THE **BIG 3** WERE MUDI, SHADES AND GODS
- THEN THE **BIG 4** WITH MIRRORWORLD
- THEN THE **BIG 5** WITH FEDERATION II
 - THERE NEVER WAS A FEDERATION I...
- (NONE OF THESE ACTUALLY **WERE** BIG COMPARED WITH WHAT WAS TO COME, OF COURSE)

RANGE

- 10 YEARS AFTER ROY BEGAN, WE HAD A **FLOWERING** OF NEW MUDI DESCENDENTS:
 - FEDERATION II – SPACE OPERA
 - THE ZONE – ADULT (SCORE TO SCORE)
 - DARK CITY – CYBERPUNK
 - STRAT – HOLIDAY ON THE MOON
 - TRASH – “FIRE-BREATHING **CABBAGES** AND INFLATABLE HOVER-CARS”
 - VOID – MAGICAL ADULT
 - PRODIGY – ANCIENT BRITAIN
 - EMPYRION – UNDERWATER CITY
 - SPACERS – GENERATION SPACESHIP

FANTASY

- EVEN THE **FANTASY** WORLDS **VARIED** CONSIDERABLY
 - GODS – END GAME PLAYERS CAN CREATE OBJECTS USING POINTS GIVEN BY WORSHIPPERS
 - MIRRORWORLD – ROLLING RESETS
 - AVALON – GRID-BASED IN PLACES
 - BLOODSTONE – OBJECT DECOMPOSITION (HUMANS MADE OF **260** PARTS)
 - AMP – OBJECTS WITH SHAPE
 - STRATA – INTERNAL CURRENCY
 - WARLORD – HIGHLY COMBAT-INTENSIVE

- *ABERMUD, ALAN COX, 1987*

Your wimpy value is set to 15. See 'help change' to see what that means.

The Temple Of Paradise

You stand in the Temple of Paradise, a huge sandstone structure whose walls are decorated with ancient carvings and runes, some so old that even the priests no longer know their meanings.

A single set of steps lead south, descending the huge mound upon which the temple is built and ending in the forests below.

A roaring fire burns here. Its flames make the temple sparkle and glitter.

At your feet a huge sacrificial pit allows you to give valuables to the gods in the hope of being rewarded.

A furlled umbrella lies here.

Obvious exits are:

North : Welcome Center

South : Forest Track

Down : Forest Track

Last login: Wed Sep 7 17:43:26 2005

>

BREAKING FREE

- UP UNTIL THIS POINT, VIRTUAL WORLD DEVELOPMENT WAS MAINLY A **UK** THING
 - FOR LARGE **MAINFRAMES** OR HOME-BUILT KIT
- *ABERMUD* WAS DIFFERENT: IT RAN UNDER **UNIX**
- WHEN IT WAS RELEASED, IT **RAPIDLY** SPREAD ACROSS UNIVERSITY MACHINES **WORLDWIDE**
 - TENS OF **THOUSANDS** OF PEOPLE PLAYED IT
 - THEY **DIDN'T** SEE THE **OTHER** EARLY WORLDS
- THEY WERE **INSPIRED** BY *ABERMUD* TO WRITE THEIR **OWN** VIRTUAL WORLDS

THE GREAT SCHISM

- THERE HAD ALWAYS BEEN A **MIX** OF PLAYERS IN VIRTUAL WORLDS UP UNTIL THIS POINT
 - GAME-ORIENTED, SOCIAL-ORIENTED, WHATEVER
- *ABERMUD* WAS MORE ON THE **GAME** SIDE
 - SOCIALISERS FELT **SHUT OUT**
- IN 1989, **JIM ASPNES** AT CARNEGIE MELLON WROTE *TINYMUD*
- IT DROPPED ALL **GAME** ELEMENTS AND CONCENTRATED ON **BUILDING**
 - TAKING IDEAS FROM RICH SKRENTA'S *MONSTER*

SOCIAL WORLDS

- *TINYMUD* **BURNT OUT** QUICKLY, BUT NOT BEFORE INSPIRING STEPHEN WHITE TO WRITE *TINYMUCK*
- HE THEN USED *TINYMUCK* AS A **TEMPLATE** FOR *MOO*
- *TINYMUCK* **ALSO** INSPIRED LARRY FOARD TO WRITE *TINYMUSH*
- THUS, THERE WERE EVENTUALLY **THREE** SOCIAL WORLD BRANCHES COMING FROM *TINYMUD* : THE **MUCKS**, **MUSHES** AND **MOOS**
- MOST **FAMOUS** OF THESE WAS *LAMB DAMOO* – THE *SECOND LIFE* OF ITS DAY
 - FULL OF JOURNALISTS, EDUCATORS AND SELF-SATISFACTION...

- DIKUMUD, COPENHAGEN UNIVERSITY, 1990

```
[x2] A barrel has been left here.  
An angry-looking statue of Hoturi is standing here.  
An angry-looking statue of Priapus is standing here.  
A statue of Odin is standing behind the altar.  
A Sign for Newbies is here.  
You are a guest here until you save yourself.
```

If you need
to get to your guild, use the guild medallion in your inventory. If you lose
it, pray to the statue of Odin for another.

```
105m/202e/38hlook  
Temple of Udgaard
```

You are inside the small and humble village temple in Udgaard. A simple
stone altar, with strange stone carvings, is placed against the north wall. A
small humble donation room is to the east. The temple exit is south to the
Village Square.

```
[x2] A barrel has been left here.  
An angry-looking statue of Hoturi is standing here.  
An angry-looking statue of Priapus is standing here.  
A statue of Odin is standing behind the altar.  
A Sign for Newbies is here.
```

```
105m/202e/38h
```

BACKLASH

- **FREED** FROM HAVING TO SATISFY NON-GAMERS, THE GAMERS WENT **HARD CORE**
- **DIKUMUD WAS ALL GAME**
 - IT INCORPORATED MANY ELEMENTS FROM *D&D*
 - **HARD-CODED**, IT RAN **FAST**
- IT WAS **VERY** EASY TO SET UP, AND WE GOT OVER A **THOUSAND** DIKUS AS A RESULT
 - MAINLY **CLONES** OF EACH OTHER, BUT SOME WERE **EXTENSIVELY** REWRITTEN
- **DIKUMUDS** HAVE A **LARGE** BRANCH OFF THE **MUD** FAMILY TREE, WITH **MANY** SPIN-OFFS

MIDDLE WAY

- LARS PENSJÖ'S LPMUD WAS A MIDDLE WAY
- IT HAD **GAME** MECHANICS, BUT WAS PROGRAMMABLE USING ITS **LPC** LANGUAGE
- LPMUDS WERE CHARACTERISED BY *originality*
 - THEY TENDED TO BE VERY **DIFFERENT** FROM EACH OTHER
- THEY WERE HARDER TO INSTALL, THOUGH, AND APPEALED MORE TO **PROGRAMMERS** THAN TO (NON-PROGRAMMER) **GAMERS**
- DIKUMUDS **BRUSHED** THEM ASIDE

THIRD AGE

- THIS **SCHISM** BEGAN THE **THIRD** AGE, 1989-1995
- IN THIS ERA, THINGS SETTLED DOWN:
 - 1989 TINYMUD SOCIAL
 - 1989 LPMUD BALANCED
 - 1990 DIKUMUD GAME
 - 1990 TINYMUCK SOCIAL
 - 1990 TINYMUSH SOCIAL [ROLE-PLAYING]
 - 1990 MOO SOCIAL [EDUCATION]
 - 1991-PRESENT ONE OF THE ABOVE...
- NOTE THAT THE CAPACITY FOR INNOVATION **FELL** ONCE GAME ENGINES BECAME A **VIABLE** OPTION
 - ARE WE SEEING THE SAME THING WITH UNITY AND UNREAL ENGINE GAMES?

SUMMARY

- FOR THE FIRST **10** YEARS OF THEIR EXISTENCE, MUDS WERE ALL ABOUT **FREEDOM**
 - **NO** CLASSES, **NO** RACES, **NO** FORMAL QUESTS
- THERE WAS A **BALANCE** BETWEEN PEOPLE PLAYING FOR SOCIAL AND FOR GAME REASONS
- IN 1989, *TINYMUD* APPEARED
 - SOCIALISERS **LEFT** FOR MOOS, MUCKS, MUSHES
- WITH THE SOCIALISER **BRAKES** OFF, GAMERS WENT ALL OUT FOR HARD-CORE **GAMING** FUN
 - THUS, THE *DIKUMUD* PARADIGM THAT IS MMORPGS

PHILOSOPHY

- **GAME** WORLDS AND **SOCIAL** WORLDS WERE EACH DEFINED BY **NOT** BEING THE OTHER
- THIS **LOCKED IN** THEIR PHILOSOPHIES OF "GAME" AND "NOT A GAME"
- THEY WERE **ALSO** DEFINED BY NOT BEING WHAT WENT **BEFORE** THEM
- IN BALANCED WORLDS, THE WORLD WAS **CONSTRAINED** BUT THE PLAYERS **FREE**
 - IN SOCIAL WORLDS, THE WORLD IS **ALSO** FREE
 - IN GAME WORLDS, THE **PLAYERS** ARE ALSO **CONSTRAINED**

TODAY

- WE'RE LIVING WITH THE **LEGACY** OF THIS EVEN **TODAY**
- MMORPG DESIGNERS IN THE *DIKUMUD* PARADIGM ARE **STILL** TRYING NOT TO MAKE SOCIAL OR BALANCED WORLDS
 - FROM SOME SUBCONSCIOUS, COLLECTIVE MEMORY...
- LIKEWISE THE FEW **BALANCED** COMMERCIAL MMOS OUT THERE ARE TRYING NOT TO **SPLIT**
 - *EVE ONLINE'S* BAND OF BROTHERS (GAME) AND GOONSWARM ((ANTI))SOCIAL)

FOURTH AGE

- THE **FOURTH** AGE OF VIRTUAL WORLDS (1995-1997) WAS THE **SHORTEST** BUT MOST **EXCITING**
- BEFORE THE INTERNET WENT **COMMERCIAL**, ONLINE SERVICES WERE DOMINATED BY **FIVE** US ONLINE SERVICE PROVIDERS:
 - COMPU SERVE, PRODIGY, AOL, DELPHI, GENIE
- ONLY **GENIE** WAS PRO-GAMES
 - ELSEWHERE, GAMES WERE RESENTFULLY TOLERATED BECAUSE GAMERS WERE **10%** OF THE **USERS** BUT GENERATED **50%** OF THE **PROFITS**
- THE UK WAS **STYMIED** BECAUSE PHONE CALLS COST WAY TOO MUCH MONEY - £2.50 AN HOUR FOR PSS
 - LOCAL CALLS IN THE USA WERE **FREE!**

EXPANSION

- A 1993 **PRICE WAR** MADE THE INTERNET ACCESSIBLE TO ORDINARY US COMPUTER-USERS
- **HORDES** OF AMERICANS SIGNED UP, LOOKING FOR SOMETHING TO **DO**
- **MANY** WANTED TO PLAY **GAMES**
- AOL SIGNED UP THE **BEST** COMMERCIAL GAMES IT **COULD** AND PAID A **GOOD** ROYALTY:
 - *GEMSTONE III, DRAGON'S GATE, FEDERATION II*
 - THE FIRST **TWO** THERE WERE DESCENDENTS OF *SCEPTRE OF GOTH* MORE THAN *MUD*
 - *DRAGON'S GATE* LATER LED TO *DARK AGE OF CAMELOT*

HEIGHT

- AT ITS **HEIGHT**, THESE GAMES WERE RAKING IN **\$1,000,000** A **MONTH** EACH!
- EVEN AN OLD, "FAILING" AOL GAME, *NEVERWINTER NIGHTS* (SCREENSHOT LATER) TOOK \$5,000,000 IN 1996
 - IT COULD SUPPORT 500 SIMULTANEOUS PLAYERS
- THE REASON: **PER-HOUR CHARGING**
 - THE LONGER YOU **PLAYED**, THE MORE YOU **PAID**
 - AROUND **\$1.95** AN HOUR
 - BETTER THAN THE **\$6** PER HOUR A DECADE EARLIER (PLUS ANOTHER **\$3-\$6** DURING PRIME TIME)...

COLLAPSE

- HOWEVER, SMALL **BULLETIN-BOARD** COMPANIES SET THEMSELVES UP AS LOCAL INTERNET PROVIDERS AT A **FLAT** RATE
 - AOL **HAD** TO GO FLAT RATE TO **COMPETE**
- BY 1997, THE MONEY FLOW HAD **DRIED UP**
- THE FOURTH AGE **WOULD** HAVE REVERTED TO THE THIRD AGE HERE EXCEPT FOR **ONE** THING
- AT ITS PEAK, *GEMSTONE III* WAS ATTRACTING **2,000-2,500** SIMULTANEOUS PLAYERS
- WHAT IF YOU COULD GET **10 TIMES** THAT?
 - YOU **COULD** MAKE MONEY CHARGING A FLAT RATE!

BACKING UP A LITTLE...

- AS I HINTED AT EARLIER, MUD WASN'T THE **ONLY** EARLY VIRTUAL WORLD
- WHETHER IT WAS **CHRONOLOGICALLY** FIRST DEPENDS ON YOUR DEFINITION OF "VIRTUAL WORLD"
 - IT IS BY **MINE**, BUT THEN IT **WOULD** BE...
- THE OTHER EARLY **FLOWERS** OF THE FIRST AGE DIDN'T **FLOURISH**
 - THEY DIDN'T REALLY DEVELOP **SEEDS** OF THEIR OWN
- SURPRISINGLY, **GRAPHICAL** WORLDS SUFFERED MOST

INSPIRED

- ISLAND OF KESMAI **DID** INSPIRE OTHERS
- NEVERWINTER NIGHTS, 1991



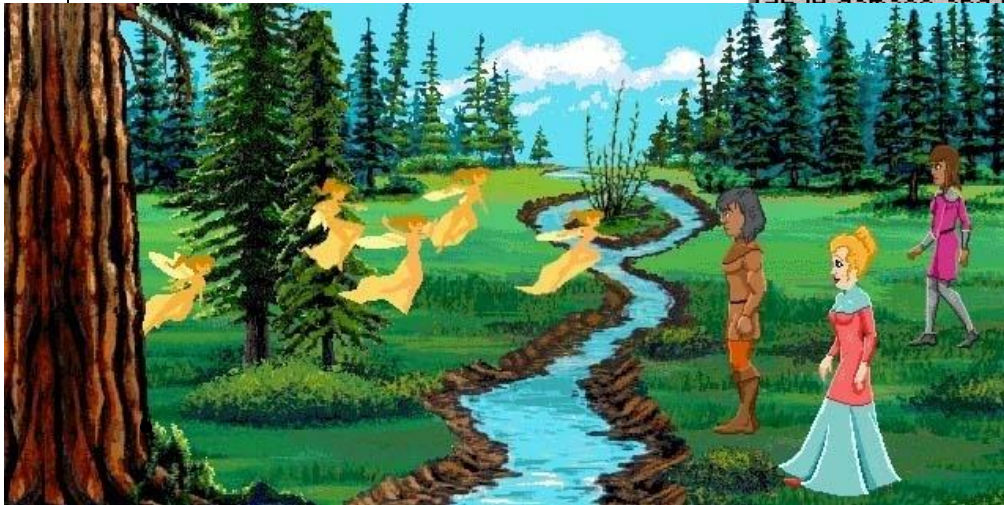
- KINGDOM OF DRAKKAR, 1992

UNINSPIRED

- HOWEVER, AFTER 15 YEARS OR SO THE 10K LINE **ALSO** DIED OUT
- REASON: THERE WERE MANY **MORE** WOULD-BE **DESIGNERS** AND **DEVELOPERS** WITH A **MUD** BACKGROUND
 - BECAUSE OF ALL THOSE **FREE** GAMES
- COMPANIES WANTING TO MAKE **GRAPHICAL** WORLDS HAD ARTISTS ANYWAY AND A **LARGE** POOL OF **MUD-LINE** TALENT TO DRAW ON
 - VERY **FEW** PEOPLE HAD WORKED ON 10K-LINE GAMES
- THERE WAS SO **MUCH** SPARE TALENT THAT SOME STARTED UP THEIR **OWN** DEVELOPMENT COMPANIES

DEAD ENDS

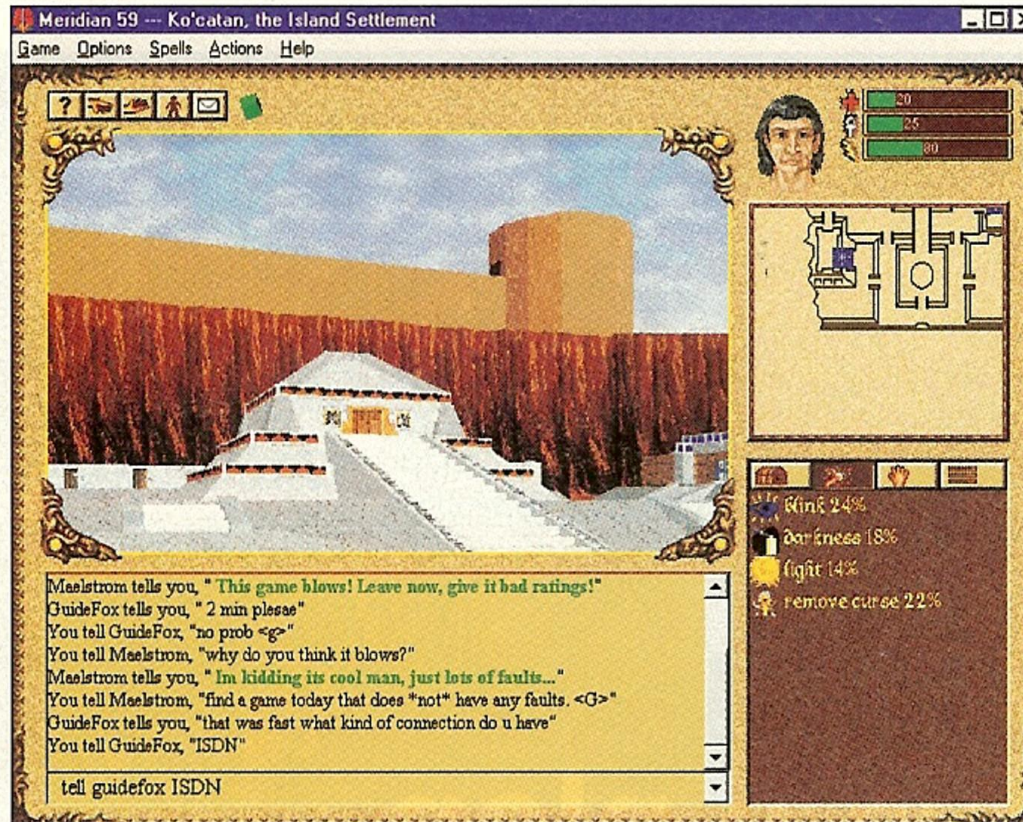
- OF COURSE, NOT **ALL** THEIR IDEAS HAD A **FUTURE**
- *SHADOWS OF YSERBIUS*, 1992



THE REALM, 1997

CLOSE...

- *MERIDIAN 59*, MIKE SELLERS & DAMION SCHUBERT, 1996



RECALL CE217

POSTMORTEMS

- M59 WAS **ALMOST** A BREAKTHROUGH PRODUCT, BUT IT NEEDED TOO HIGH A SPECIFICATION **PC** AND **MODEM**

FIFTH AGE

- THE FIFTH AGE BEGAN WITH ULTIMA ONLINE, 1997



- *ULTIMA ONLINE* AIMED AT 20,000, HOPED FOR 40,000 AND GOT **100,000** SUBSCRIBERS WITHIN A YEAR
- NOW, **YEARS LATER**, IT **STILL** HAS SOMETHING LIKE **70,000** SUBSCRIBERS
 - AFTER PEAKING AT 250,000 IN 2003
- IT **STILL** TAKES AROUND **\$1,000,000** A MONTH
 - AND IT'S BEEN RUNNING **337 MONTHS!**
- *UO* MADE **REGULAR** COMPUTER GAMERS **NOTICE** VIRTUAL WORLDS
 - AND REGULAR COMPUTER GAME **DEVELOPERS...**
- *LINEAGE* DID THE SAME THING IN **KOREA**

LINEAGE

- LINEAGE, NCSoft, 1997



EVERQUEST

- *EVERQUEST*, SONY ONLINE ENTERTAINMENT, 1999

- SOE
WAS
CALLED
VERANT
INTER-
ACTIVE
AT THE
TIME



NOT DIKUMUD

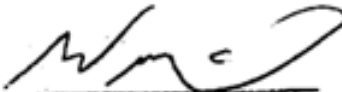
- **EVERQUEST RESEMBLED DIKUMUD, EXCEPT FOR THE GRAPHICS**

SWORN STATEMENT

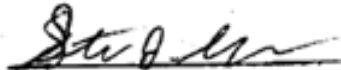
As programmer on the server side of EverQuest on we hereby declare, that:

EverQuest was not based on DIKU MUD Source code, nor is there any DIKU MUD Source Code in EverQuest. EverQuest is not a derivative of DIKU MUD. The EverQuest Source Code was built from the ground up. EverQuest has not, in whole or in part, infringed on any copyrighted DIKU MUD material.

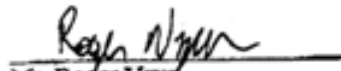
I hereby declare that the above is the full truth.



Mr. Brad McQuaid



Mr. Steve Clover



Mr. Roger Uzum

PEOPLE!

- M59S DAMION SCHUBERT, ACS JEREMY GAFFNEY, UO'S RAPH KOSTER



BIG REVISITED

- THE FIRST FIFTH-AGE **GRAPHICAL** WORLDS WERE DEVELOPED BY PEOPLE FROM A **TEXTUAL** WORLD BACKGROUND
- IN THE WEST, THE **BIG 3** WERE *ULTIMA ONLINE*, *EVERQUEST* AND *ASHERON'S CALL*
- THEN THE **BIG 4** WITH *ANARCHY ONLINE*
- THEN THE **BIG 5** WITH *DARK AGE OF CAMELOT*
- NONE OF THESE ACTUALLY **WERE** BIG COMPARED WITH WHAT WAS TO COME, OF COURSE...

WORLD OF WARCRAFT

- SINCE 2004, WOW HAS BEEN DOMINANT



THE POINT

- **BIG N** WORLDS SHOW WHAT'S **FEASIBLE**
- IN THE MINDS OF THE **IMAGINATIVE**, THEY ALSO SHOW WHAT'S **POSSIBLE**
- **ALL** PLAYERS WANT TO BE **DESIGNERS**
- ONLY A FEW ACTUALLY **ARE** DESIGNERS
 - MOST JUST WANT TO **PLAY** THEIR DESIGNS
- BUT WHEN YOU GET A **CRITICAL MASS** OF DESIGN TALENT, THERE'S OFTEN A **FLOWERING**
 - A **BRIEF** PERIOD BEFORE GAME ENGINES APPEAR AND **CONSTRAIN** CREATIVITY

NON-GAMES

- *SECOND LIFE*, 2003



TODAY

- TODAY, THERE ARE **MANY** VIRTUAL WORLDS
- THE **MAIN** ONES IN THE **WEST** ARE WOW, UO, LOTRO, EVE, SWTOR, STO, EQ2, ESO, AOC, LOST ARK, RUNESCAPE, GW2, SWL, MAPLESTORY, DDO, FFXI, FFXIV, (WOT), ELITE:D, BDO, NW, F76, T&L, SL
- **ALL** OF THESE **EXCEPT** SECOND LIFE ARE **GAME** WORLDS
- HOWEVER, THERE **ARE** SOME **HUGE** SOCIAL WORLDS OUT THERE FOR **YOUNGSTERS**
 - HABBO, ROBLOX AND MINECRAFT DOMINATE

NON-GAMES

- *HABBO HOTEL*, 2000



AND NOW

- *ROBLOX*, 2006



ALSO

- *MINECRAFT*, 2009



SIXTH AGE

- THE SWITCH IN **REVENUE MODEL** FROM SUBSCRIPTION TO FREE-TO-PLAY CAUSED A **SEA CHANGE** IN MMO DESIGN
- 2012 WAS THE **TIPPING POINT**
- WE'RE NOW IN WHAT CAN BE CALLED THE **SIXTH AGE** OF VIRTUAL WORLDS
- THIS COULD END IN THEIR **DEATH** OR IN THEIR **REBIRTH**, BUT IT'S GOING TO BE **TRAUMATIC** EITHER WAY
 - WATCH THIS SPACE...

SEVENTH AGE?

- AS FOR WHAT'S **NEXT**, ALL THE FOLLOWING HAVE BEEN SUGGESTED IN RECENT YEARS:
 - CLOUD STREAMING – NO NEED FOR CLIENT SOFTWARE
 - VIRTUAL REALITY – ALWAYS 5 YEARS AWAY
 - METAVERSE – VR/AR IN ONE INTERNET-LIKE WORLD
 - BLOCKCHAINS – MOVE STUFF BETWEEN WORLDS
 - ASSETS/ENGINES – ANYONE CAN MAKE THEIR OWN WORLD!
 - AI – CODING, ASSET-CREATION, INTELLIGENT NPCs, ...
 - NEW REVENUE MODELS – FREE GAMES, BUT RENT SERVERS
 - FRAGMENTATION – DESIGN GOES IN DIFFERENT DIRECTIONS
 - DILUTION – DESIGN WEAKENED SO THEY'RE NO LONGER FUN

TERMINOLOGY I

- A FINAL NOTE ON TERMINOLOGY HERE: IT **CHANGES**
- IN THE FIRST AGE, VIRTUAL WORLDS WERE CALLED BY THEIR **INDIVIDUAL** NAMES
 - *MUD, AVATAR, IOK, SOG, ...*
- IN THE SECOND AGE, THEY BECAME "**MUDS**"
 - "MUD" WAS USED TO DISTINGUISH THE GAME FROM THE GENRE
 - OTHER WORDS **WERE** TRIED, SUCH AS "**MUG**" AND "**MUA**", BUT THEY NEVER TOOK OFF

TERMINOLOGY 2

- IN THE THIRD AGE, **SOCIAL** WORLDS USED “MUD” TO REFER TO **GAME** WORLDS AND “MOO”/“MUCK”/“MUSH” FOR THEIR **OWN** TYPE
 - THEY USED “MU*” IF THEY MEANT ALL SOCIAL WORLDS, AND SOME RELUCTANTLY COUNTED MUDS IN THAT, TOO...
- **GAME** WORLDS CALLED **ALL** VIRTUAL WORLDS, INCLUDING SOCIAL WORLDS, “MUDS”
- GRAPHICAL VIRTUAL WORLDS WERE CALLED “**GRAPHICAL MUDS**” UNTIL THE FIFTH AGE

TERMINOLOGY 3

- NOWADAYS, **GAME** WORLDS ARE FORMALLY “**MMORPGS**”, OR “MMOS” FOR SHORT
 - A TERM CREDITED TO UO’S RICHARD GARRIOTT
- **SOCIAL** WORLDS ARE OFTEN CALLED “**VIRTUAL WORLDS**”
 - TAKING THE UMBRELLA TERM TO ENFORCE A SPLIT
 - “VIRTUAL WORLDS” IS ALSO SOMETIMES USED TO ENCOMPASS E.G. SOCIAL WEB SITES – ARGH!
- I USE “VIRTUAL WORLDS” TO MEAN **BOTH** SOCIAL **AND** GAME WORLDS

THE LAB

- NOW A WORD OR TWO ON THURSDAY'S **LAB**
 - WHICH **DOES** ACTUALLY TAKE PLACE IN A LAB, ALTHOUGH YOU **CAN** DO IT FROM HOME
- YOU'LL BE PLAYING THE VENERABLE VIRTUAL WORLD **MUD2**
 - THIS IS A TEXT-ONLY GAME, BECAUSE THAT'S ALL WE **HAD** WHEN IT WAS WRITTEN
- IT'S A **LAB** BECAUSE IF YOU **ALL** PLAY AT THE **SAME** TIME, YOU'LL GET A FEEL FOR WHAT IT WAS LIKE IN ITS **HEYDAY**

RATIONALE

- IF YOU THINK YOU DON'T **KNOW** WHAT A VIRTUAL WORLD IS, YOU **WILL** AFTER PLAYING FOR AN HOUR OR TWO
- IF YOU THINK YOU **DO** KNOW, YOU'LL COME TO UNDERSTAND THAT FANCY GRAPHICS AREN'T **PART** OF WHAT A VIRTUAL WORLD IS
- TO PLAY FROM ~~BE~~HOME, THE FILE Lab Sheet 01.pdf TELLS YOU HOW TO **LOG IN** TO MUD2
 - USE EITHER **HORIZON** OR TELNET **DIRECTLY** (IF YOU HAVE IT)

AND FINALLY...

- RAPH KOSTER'S ONLINE WORLD **TIMELINE**
 - [HTTP://WWW.RAPHKOSTER.COM/GAMING/MUDTIMELINE.SHTML](http://www.raphkoster.com/gaming/mudtimeline.shtml)
- RAPH ON VIRTUAL WORLD **HISTORY** (IN 6 MINUTES)
 - [HTTPS://YOUTU.BE/RW-LINCNSWI](https://youtu.be/RW-LINCNSWI)
- A TALK I GAVE IN 2009 THAT COVERS A LOT OF THESE ISSUES FROM A **DIFFERENT** ANGLE
 - [HTTP://WWW.MUD.CO.UK/RICHARD/IMGDC2009.PDF](http://www.mud.co.uk/richard/imgdc2009.pdf)
- A HISTORY OF SOME EARLY GRAPHICAL WORLDS
 - [HTTPS://WWW.YOUTUBE.COM/WATCH?V=VM2NCAAPDXM](https://www.youtube.com/watch?v=VM2NCAAPDXM)
- **PLAY MUDI..!** IT'S ALSO A MUSEUM PIECE, SO DON'T GET TOO EXCITED...
 - [HTTP://WWW.BRITISH-LEGENDS.COM/](http://www.british-legends.com/)