How to Work on the Same Project for 11 Years and not Let the Haters Get You Down

OR … MAME: 11 Years Later and Still Pissing People Off

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What is MAME?

- Never heard of it? See http://mamedev.org
- MAME = **M**ultiple **A**rcade **M**achine **E**mulator
- Emulates most arcade hardware in software
  - Simulates the CPUs, sound chips, and video h/w
  - Uses original ROMs and discs
  - Developer-focused (not super user friendly)
- Really two projects in one:
  - Reverse engineering arcade hardware
  - Designing a software architecture for emulation

Project History

- Started in 1997 by Nicola Salmoria
- Originally written for DOS
- Switched to Windows in 2001
- But has always been cross-platform:
  - SDLMAME for Linux and any SDL-supporting platform (<u>not</u> XMAME – that's long dead)
  - MAME OS X for Mac (<u>not</u> MacMAME – also dead)
- 100+ contributors from dozens of countries
- Source code available from the beginning

Why Is MAME Important?

MAME : Arcade Games :: LOC : Books

- Game companies tragically poor at keeping archives
  - Commercial emulators often use ROMs dumped for MAME
  - MAME devs frequently contacted for help with emulation
- Only exploit commercially successful titles
  - For every Pac-Man there's a Hopping Mappy (or 3, or 5)
  - MAME makes no value judgments on worthiness
- Must focus on usability over accuracy
  - It's OK if MAME is slow on current machines (really)
  - It's not ok if the emulator you paid for doesn't run well!

MAME Goals

1. Document CPU-based arcade hardware
2. Provide a database of known good parts
3. Provide a universal emulation platform
4. Enable analysis of arcade hardware/software
5. Enable future game playability

Tip #1: Define and understand your goals
(preferably not fame or fortune)

MAME Is Not…

- Perfect (though we strive for it)
- Consistent (many developers, many years)
- Open Source (though its source code is free)
- A means of playing free games
- A drop-in replacement for PCBs
- A platform for enhancing the games

Tip #2: Know your boundaries
(means explicitly knowing what <u>isn't</u> your goal)

Common MAME Complaints

- Games run faster in other emulators!
- Games should take advantage of my 3D video hardware!
- You should fix existing games before adding new ones!
- MAME should exactly replicate the I/O of a game PCB!
- Some of the games have pr0n in them!
- Source code is a poor means of documentation!
- MAME should be Open Source!
- Games look too blocky – MAME should make them look better!
- The "documentation" goal is B.S. – it's really about free gamez!

Tip #3: Stay Firm to Your Goals
(don't let complaints divert you from your goals)

MAME Inconsistencies

- At one time or another…
  - MAME did not support gambling-style games
  - MAME did not support vector games
  - MAME did not support laserdisc games
  - MAME was licensed under the GPL
  - MAME had a driver for Pong
  - MAME supported artificial high score saving
  - Some drivers were not included in official binaries

Tip #4: But Not Too Firm
(sometimes it makes sense to change your mind)

Some People Really Hate MAME

- MAME is the "borg" of emulators
- MAME is really all about free gamez
- MAME ruins it for collectors
- MAME has the wrong goals
- The MAME devs are pompous egomaniacs
- The MAME devs are idiots

Tip #5: Accept the Haters
(accept their existence – but mostly just ignore 'em)

MAME Is Not Our Job

- We take MAME seriously – in our spare time
- Real Life takes priority (mostly)
- Caving into complaints can make people happy
  - Gets us accolades and happy users
  - But it sets expectations that eventually kill the fun
- MAME has never accepted or dealt with money
  - Money complicates things and sets expectations

Tip #6: Ignore Fame and Fortune
(when that's your goal, it becomes a job)

Why I Love Working on MAME

- The project is huge – there's always more to do
- Nothing beats seeing a game run for the first time
- Learning how it all works is fascinating
- Building the core into a universal emulation system is a monster challenge (in a good way)
- Knowing that my work has helped others
- I freakin' love the arcade!

Tip #7: Do It for You First
(make sure you are benefiting from what you do)

Aaron's Path to Enlightenment

1. Define and understand your goals
2. Know your boundaries
3. Stay firm to your goals
4. But not too firm
5. Accept the haters
6. Ignore fame and fortune
7. Do it for you first

Q&A