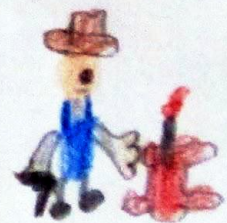


How People
can create
better videogames



Ange. Albertini, Hack.Ly 2015

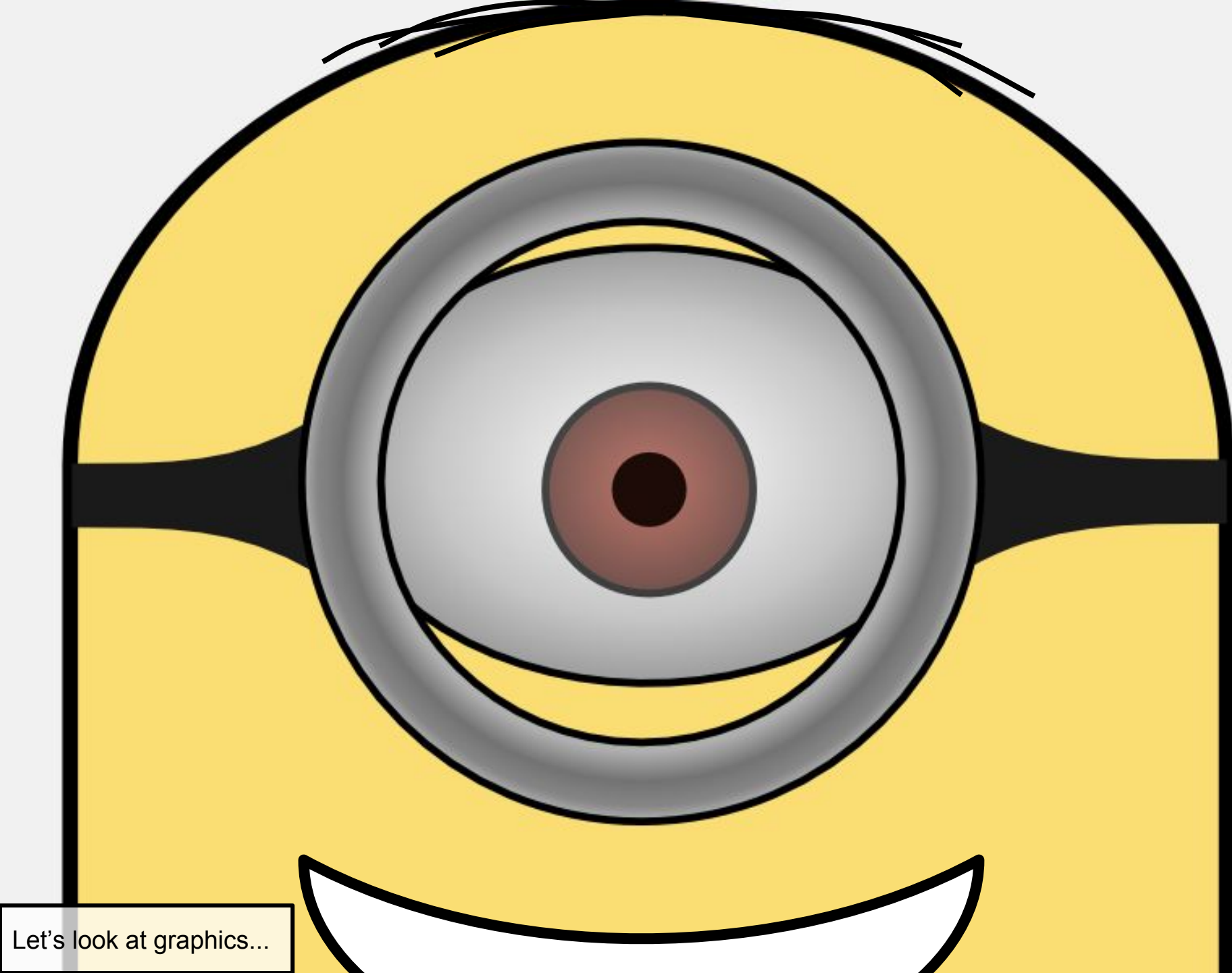


Computers have limitations.

Game developers study
how things work, in detail.

Because they know
how things really work,
they found some tricks.

Thanks to these tricks,
they can create
better video games.



Let's look at graphics...



Count the colors! This computer was limited to 16 colors...

BIO CHALLENGE



© DELPHINE Software 1989

But this picture has more than 16 colors!

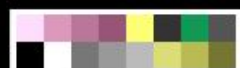
BIO CHALLENGE



© DELPHINE Software 1989

62 colors on the same system! How?

BIO CHALLENGE



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The 16 colors are updated while the picture is displayed.



Now let's use our ears...



Sound can be very fun in video games.

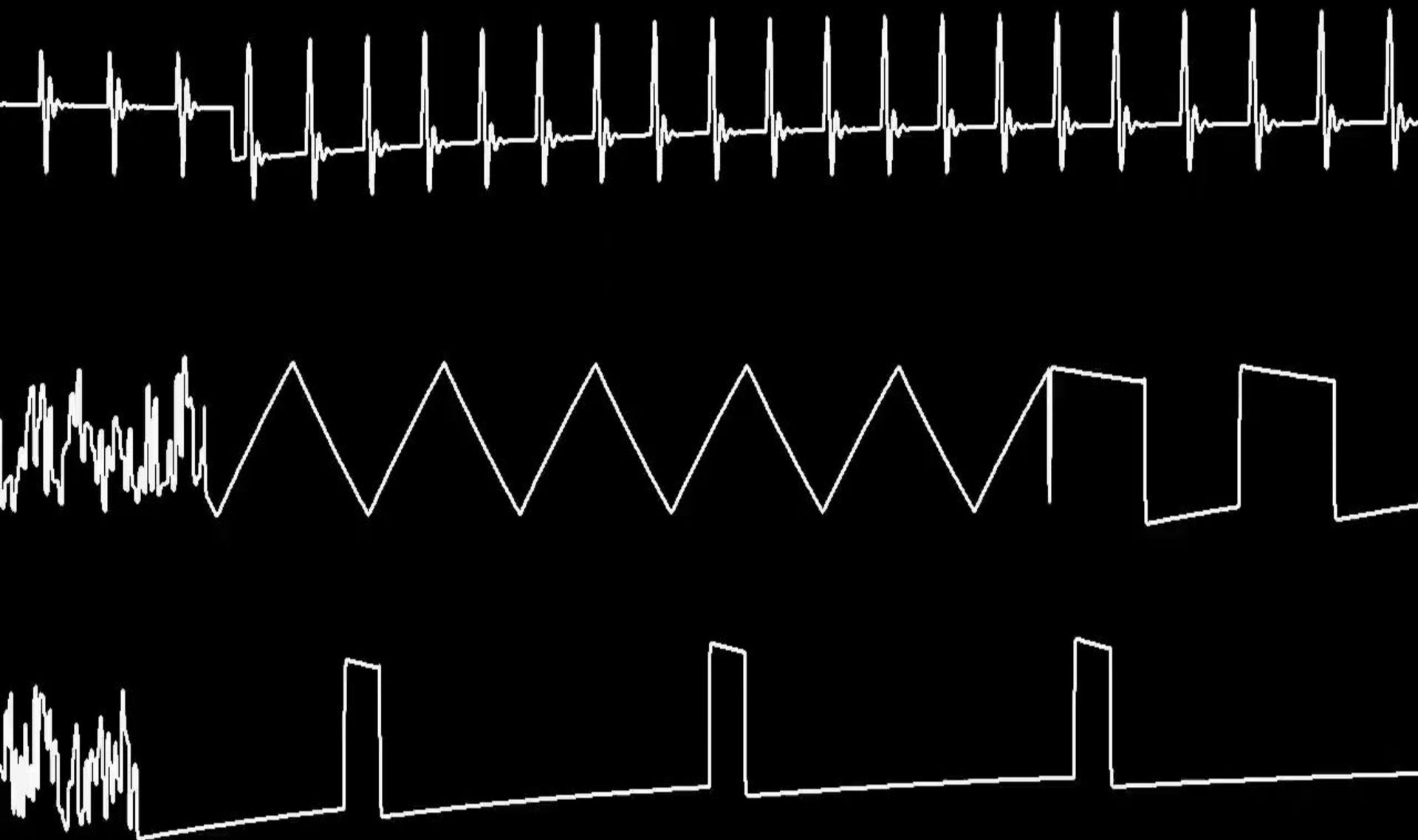


**Smooth
MCGROOVE**

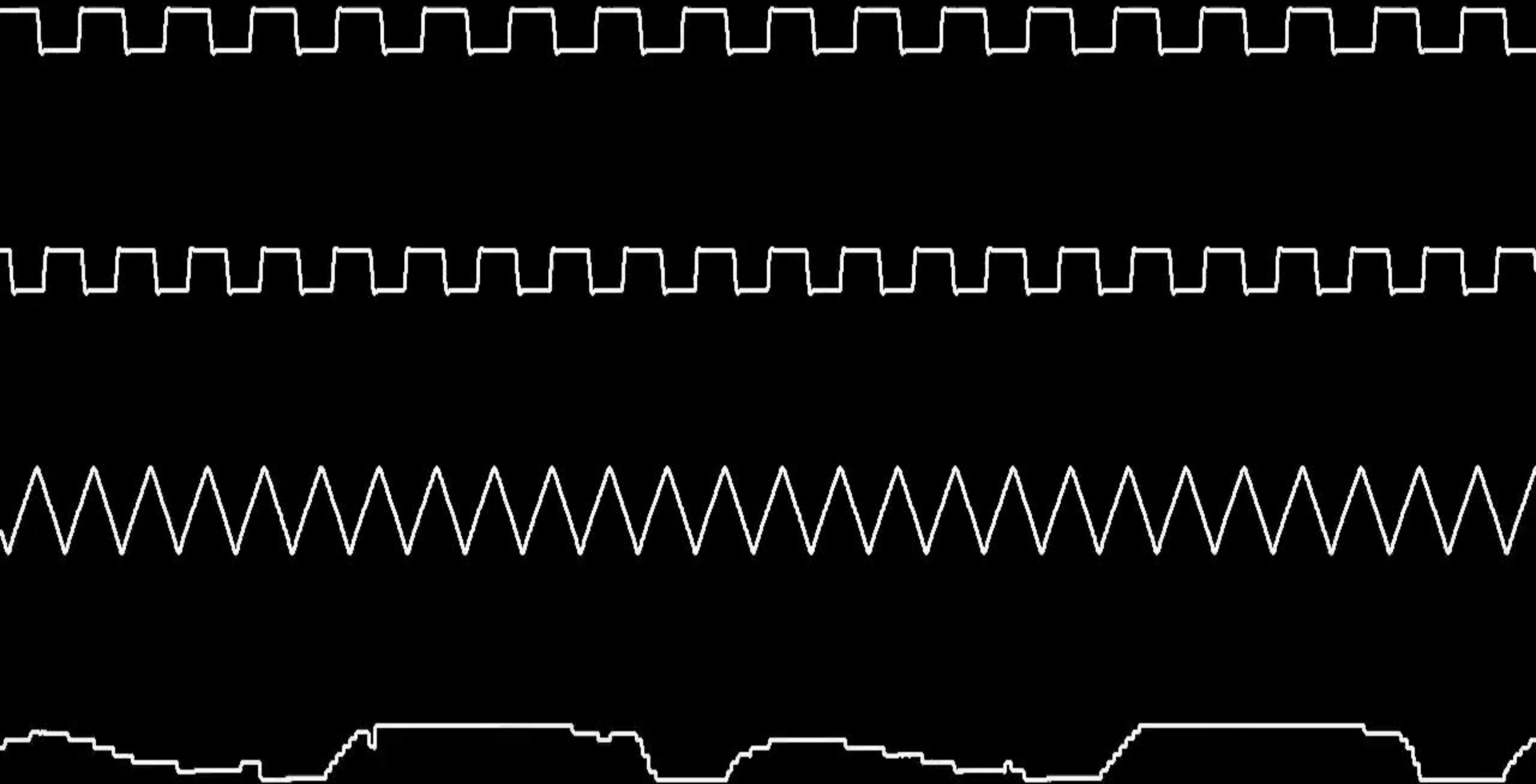
Games music is made with multiple voices.



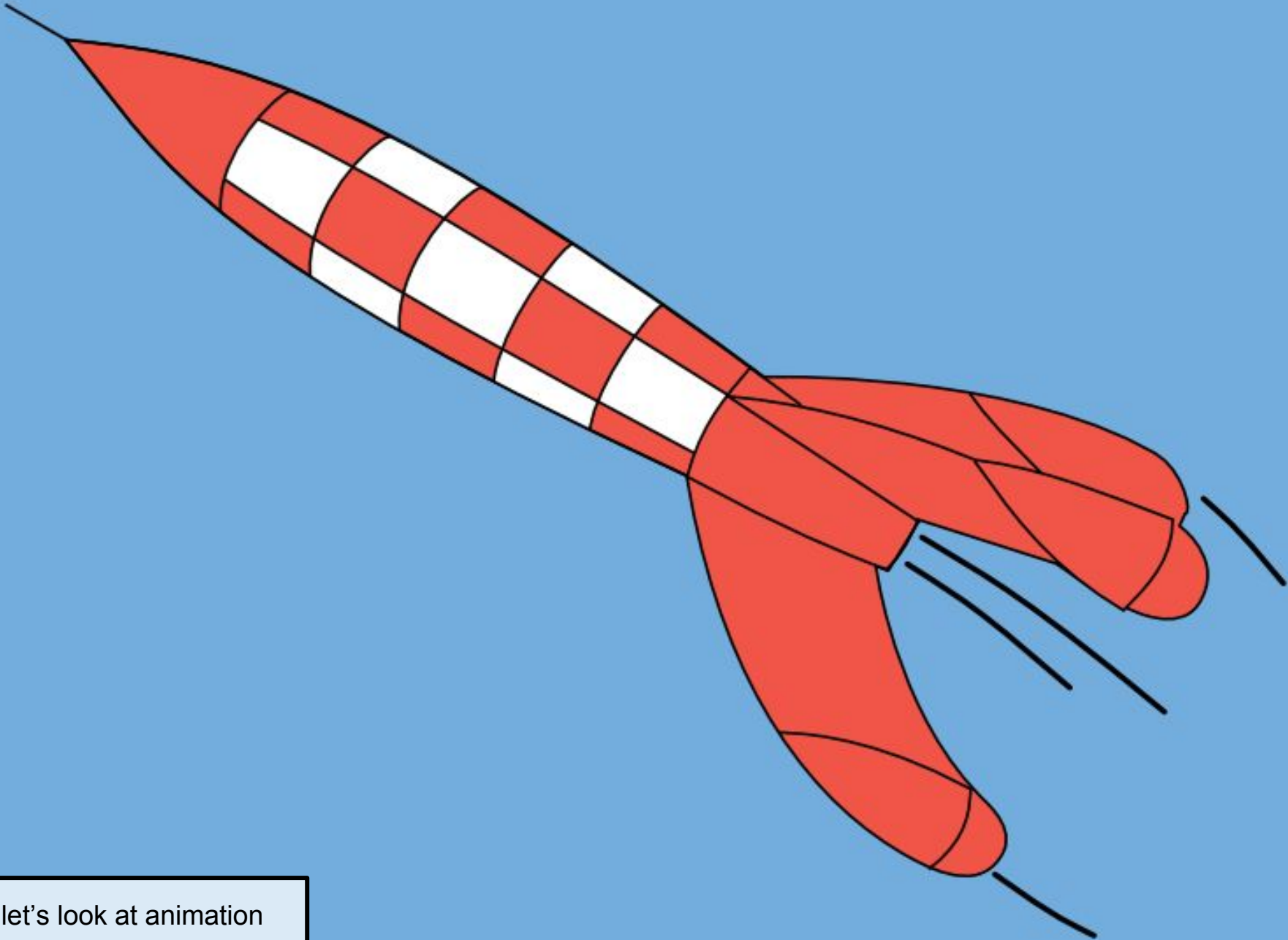
That computer had a very limited sound.



By quickly changing sound, one can get better music.



By using a bug in the hardware, a different kind of voice could be created!



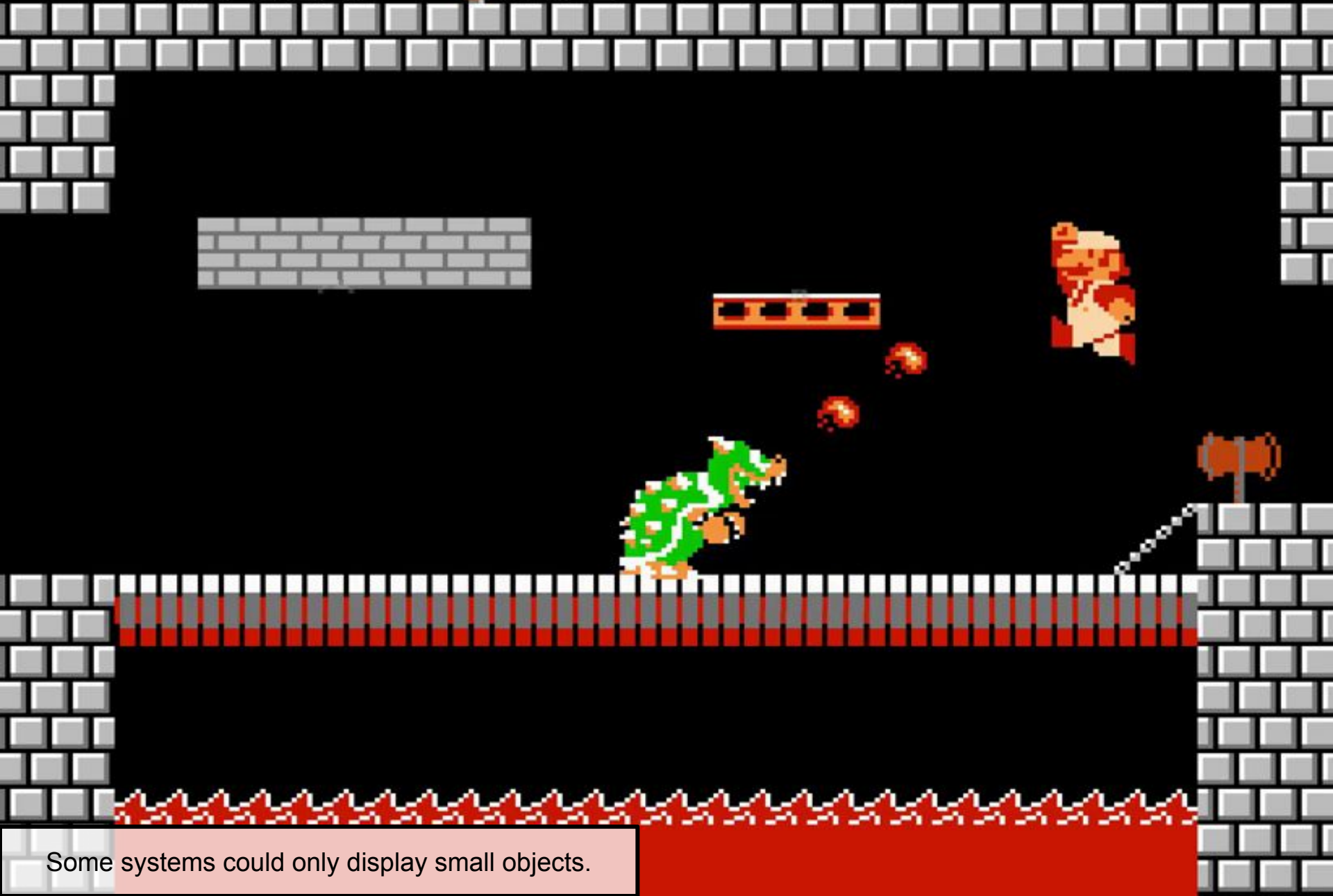
Now let's look at animation

MARIO
347950

×98

WORLD
5-4

TIME
263



Some systems could only display small objects.



But this game had a huge moving monster! How ?

MARIO
347950

● × 98

WORLD
5-4

TIME
263

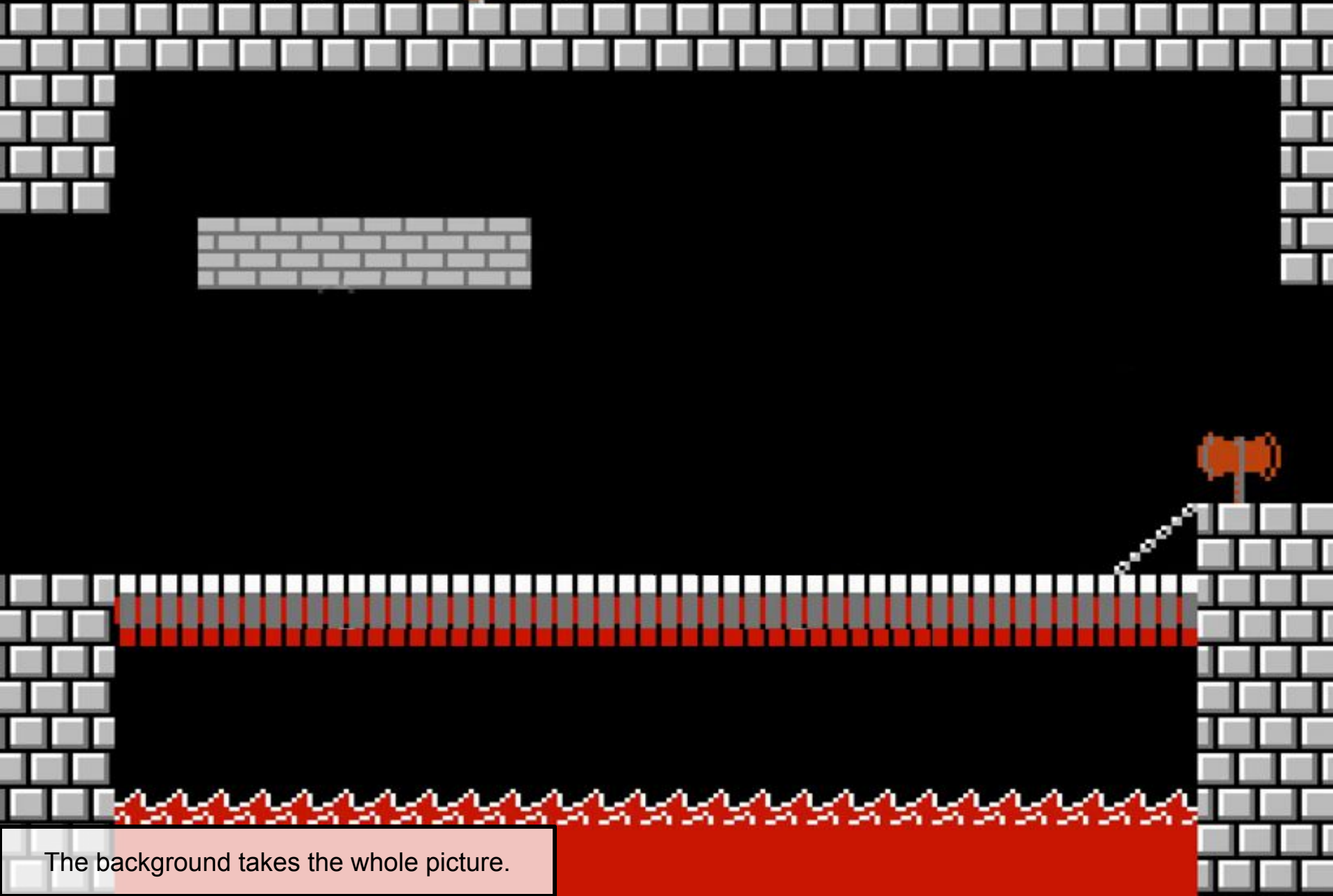


MARIO
347950

×98

WORLD
5-4

TIME
263



The background takes the whole picture.



But the moving objects are quite small.



So the monster is drawn on the ground of a dark room.
A big room where various animations of the monster are drawn.

By understanding how
things really work,
game developers can
create better games
(beyond the initial limitations)

If they didn't spend time
trying to understand how
things really work,
their video games
would be not so nice.



Hacking:

spend time to understand
how things really work
(and get awesome results)

♥ Thank You!

The END!

ANGE. Aber tini.



References

backgrounds: Super Mario Kart Wii, Rick Dangerous, Super Mario Bros, Yoshi, NinjaGo, PollyPocket, Pikachu, Ben 10

Archon - The Light and the Dark, Bio Challenge

- Smooth Mc Groove - Contra youtube.com/watch?v=l2yYauKujfM
- C64 Christmas Demo youtube.com/watch?v=X7AjnpT6guk [1:00]
- Rob Hubbard “Thundercats” youtube.com/watch?v=cdfocyMsT5s
- Joeren Tel “Stormlord” youtube.com/watch?v=w3t5P7pvxIE

- Super Mario Bros youtube.com/watch?v=Af-80nW9lc8 [10:50]
- Master Blaster youtube.com/watch?v=2STUx_9bkB4 [48:00]

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