

# In the CPU tasks that Mario had to handle in the first two seconds of 1988, the programmer obtained 3000 sheets of paper

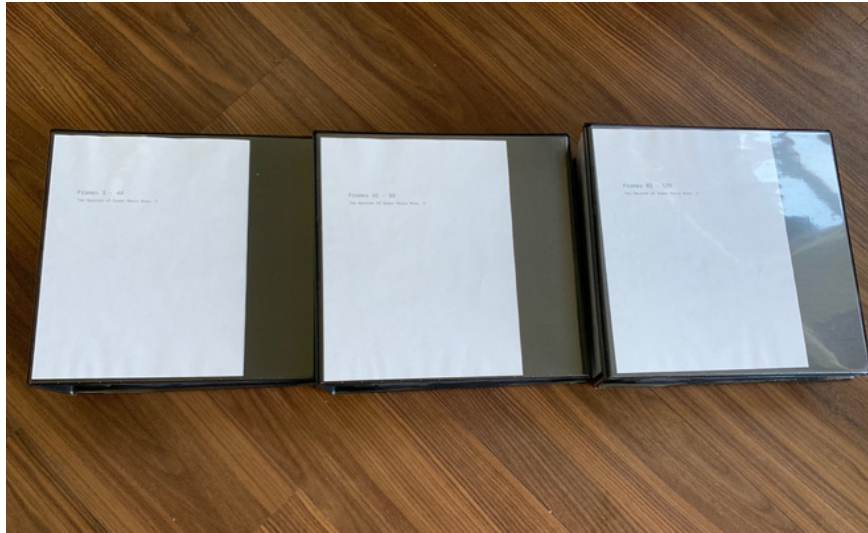
A programmer turned every frame in the first 2 seconds of Super Mario Bros. 3 into code and images and then print out paper. As a result, the guy has a total of 3,000 sheets, stacked up to 15cm high.

In order to get a series of interlocking actions in the movie as well as in the game, the computer has assembled a series of still images together into a long series. Each image is called a frame. Hundreds and millions of frames are joined by computers to form an hour-long movie or games that can play for hundreds of hours. This shows that the amount of data that CPUs can handle is indeed huge.

To make it easier to understand this, let's explore developer Matt Bierner's research. This guy turned every frame in the first 2 seconds of Super Mario Bros. 3 into code and images and then print out paper.



Result, Bierner has a total of 3,000 sheets of paper, stacked up to 15cm high. As a reminder, Super Mario Bros. 3 is a game that has been developed since 1988, so the amount of data to be processed is so great, modern games must be several times that.

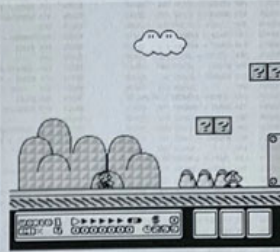


Bierner describes that, flipping each page makes him feel like he is reading each AND line of the game. All the words, the number of 3,000 pages that make up only 2 seconds of game with 120 frames on the screen. To display everything in the game, from the character's and monster's actions to the '?' flashing, the cloud is flying, on average each frame must run up to 9,750 tasks.

# frame 81

## 9307 operations

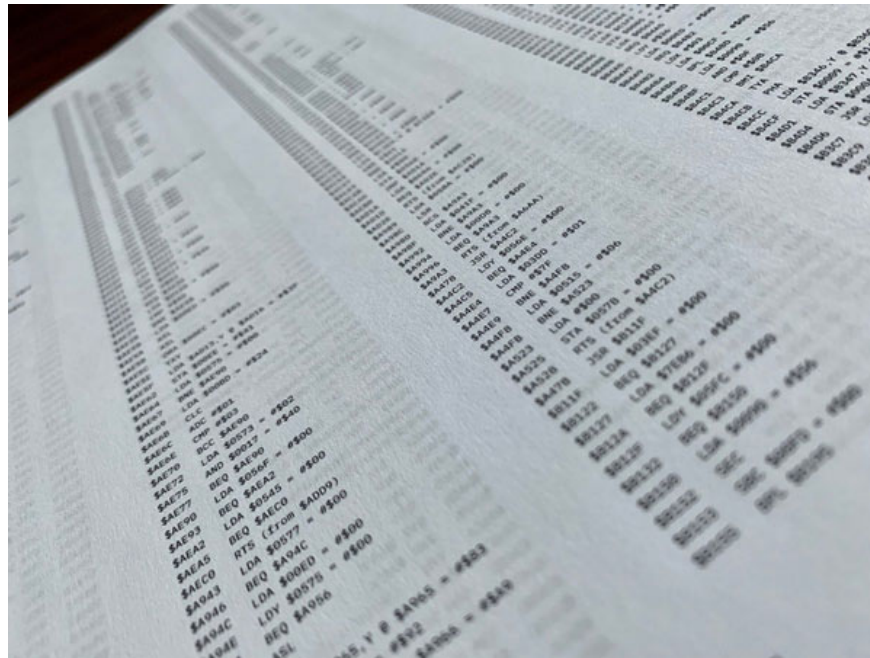
LDA - 3138	AND - 104	PLA - 53	ROR - 13
BPL - 2189	DEY - 87	STX - 51	PHP - 7
STA - 733	INX - 86	PHA - 45	PLP - 7
BNE - 341	ROL - 83	JMP - 44	EOR - 4
BEQ - 314	CLC - 80	SEC - 41	BIT - 4
CMP - 202	BCS - 75	TYA - 27	BVC - 3
JSR - 178	BCC - 73	TXA - 24	NOP - 3
RTS - 174	ASL - 68	BMI - 21	SEI - 2
LSR - 151	LDX - 66	TAX - 17	CLI - 2
DEX - 141	CPX - 65	CPY - 16	RTI - 1
INY - 119	TAY - 60	STY - 16	BVS - 1
LDY - 118	ORA - 56	DEC - 15	
ADC - 118	SBC - 56	INC - 14	



\$F000	\$F001	\$F002	\$F003	\$F004	\$F005	\$F006	\$F007	\$F008	\$F009	\$F00A	\$F00B	\$F00C	\$F00D	\$F00E	\$F00F	\$F010	\$F011	\$F012	\$F013	\$F014	\$F015	\$F016	\$F017	\$F018	\$F019	\$F01A	\$F01B	\$F01C	\$F01D	\$F01E	\$F01F	\$F020	\$F021	\$F022	\$F023	\$F024	\$F025	\$F026	\$F027	\$F028	\$F029	\$F02A	\$F02B	\$F02C	\$F02D	\$F02E	\$F02F	\$F030	\$F031	\$F032	\$F033	\$F034	\$F035	\$F036	\$F037	\$F038	\$F039	\$F03A	\$F03B	\$F03C	\$F03D	\$F03E	\$F03F	\$F040	\$F041	\$F042	\$F043	\$F044	\$F045	\$F046	\$F047	\$F048	\$F049	\$F04A	\$F04B	\$F04C	\$F04D	\$F04E	\$F04F	\$F050	\$F051	\$F052	\$F053	\$F054	\$F055	\$F056	\$F057	\$F058	\$F059	\$F05A	\$F05B	\$F05C	\$F05D	\$F05E	\$F05F	\$F060	\$F061	\$F062	\$F063	\$F064	\$F065	\$F066	\$F067	\$F068	\$F069	\$F06A	\$F06B	\$F06C	\$F06D	\$F06E	\$F06F	\$F070	\$F071	\$F072	\$F073	\$F074	\$F075	\$F076	\$F077	\$F078	\$F079	\$F07A	\$F07B	\$F07C	\$F07D	\$F07E	\$F07F	\$F080	\$F081	\$F082	\$F083	\$F084	\$F085	\$F086	\$F087	\$F088	\$F089	\$F08A	\$F08B	\$F08C	\$F08D	\$F08E	\$F08F	\$F090	\$F091	\$F092	\$F093	\$F094	\$F095	\$F096	\$F097	\$F098	\$F099	\$F09A	\$F09B	\$F09C	\$F09D	\$F09E	\$F09F	\$F0A0	\$F0A1	\$F0A2	\$F0A3	\$F0A4	\$F0A5	\$F0A6	\$F0A7	\$F0A8	\$F0A9	\$F0AA	\$F0AB	\$F0AC	\$F0AD	\$F0AE	\$F0AF	\$F0B0	\$F0B1	\$F0B2	\$F0B3	\$F0B4	\$F0B5	\$F0B6	\$F0B7	\$F0B8	\$F0B9	\$F0BA	\$F0BB	\$F0BC	\$F0BD	\$F0BE	\$F0BF	\$F0C0	\$F0C1	\$F0C2	\$F0C3	\$F0C4	\$F0C5	\$F0C6	\$F0C7	\$F0C8	\$F0C9	\$F0CA	\$F0CB	\$F0CC	\$F0CD	\$F0CE	\$F0CF	\$F0D0	\$F0D1	\$F0D2	\$F0D3	\$F0D4	\$F0D5	\$F0D6	\$F0D7	\$F0D8	\$F0D9	\$F0DA	\$F0DB	\$F0DC	\$F0DD	\$F0DE	\$F0DF	\$F0E0	\$F0E1	\$F0E2	\$F0E3	\$F0E4	\$F0E5	\$F0E6	\$F0E7	\$F0E8	\$F0E9	\$F0EA	\$F0EB	\$F0EC	\$F0ED	\$F0EE	\$F0EF	\$F0F0	\$F0F1	\$F0F2	\$F0F3	\$F0F4	\$F0F5	\$F0F6	\$F0F7	\$F0F8	\$F0F9	\$F0FA	\$F0FB	\$F0FC	\$F0FD	\$F0FE	\$F0FF	\$F100	\$F101	\$F102	\$F103	\$F104	\$F105	\$F106	\$F107	\$F108	\$F109	\$F10A	\$F10B	\$F10C	\$F10D	\$F10E	\$F10F	\$F110	\$F111	\$F112	\$F113	\$F114	\$F115	\$F116	\$F117	\$F118	\$F119	\$F11A	\$F11B	\$F11C	\$F11D	\$F11E	\$F11F	\$F120	\$F121	\$F122	\$F123	\$F124	\$F125	\$F126	\$F127	\$F128	\$F129	\$F12A	\$F12B	\$F12C	\$F12D	\$F12E	\$F12F	\$F130	\$F131	\$F132	\$F133	\$F134	\$F135	\$F136	\$F137	\$F138	\$F139	\$F13A	\$F13B	\$F13C	\$F13D	\$F13E	\$F13F	\$F140	\$F141	\$F142	\$F143	\$F144	\$F145	\$F146	\$F147	\$F148	\$F149	\$F14A	\$F14B	\$F14C	\$F14D	\$F14E	\$F14F	\$F150	\$F151	\$F152	\$F153	\$F154	\$F155	\$F156	\$F157	\$F158	\$F159	\$F15A	\$F15B	\$F15C	\$F15D	\$F15E	\$F15F	\$F160	\$F161	\$F162	\$F163	\$F164	\$F165	\$F166	\$F167	\$F168	\$F169	\$F16A	\$F16B	\$F16C	\$F16D	\$F16E	\$F16F	\$F170	\$F171	\$F172	\$F173	\$F174	\$F175	\$F176	\$F177	\$F178	\$F179	\$F17A	\$F17B	\$F17C	\$F17D	\$F17E	\$F17F	\$F180	\$F181	\$F182	\$F183	\$F184	\$F185	\$F186	\$F187	\$F188	\$F189	\$F18A	\$F18B	\$F18C	\$F18D	\$F18E	\$F18F	\$F190	\$F191	\$F192	\$F193	\$F194	\$F195	\$F196	\$F197	\$F198	\$F199	\$F19A	\$F19B	\$F19C	\$F19D	\$F19E	\$F19F	\$F1A0	\$F1A1	\$F1A2	\$F1A3	\$F1A4	\$F1A5	\$F1A6	\$F1A7	\$F1A8	\$F1A9	\$F1AA	\$F1AB	\$F1AC	\$F1AD	\$F1AE	\$F1AF	\$F1B0	\$F1B1	\$F1B2	\$F1B3	\$F1B4	\$F1B5	\$F1B6	\$F1B7	\$F1B8	\$F1B9	\$F1BA	\$F1BB	\$F1BC	\$F1BD	\$F1BE	\$F1BF	\$F1C0	\$F1C1	\$F1C2	\$F1C3	\$F1C4	\$F1C5	\$F1C6	\$F1C7	\$F1C8	\$F1C9	\$F1CA	\$F1CB	\$F1CC	\$F1CD	\$F1CE	\$F1CF	\$F1D0	\$F1D1	\$F1D2	\$F1D3	\$F1D4	\$F1D5	\$F1D6	\$F1D7	\$F1D8	\$F1D9	\$F1DA	\$F1DB	\$F1DC	\$F1DD	\$F1DE	\$F1DF	\$F1E0	\$F1E1	\$F1E2	\$F1E3	\$F1E4	\$F1E5	\$F1E6	\$F1E7	\$F1E8	\$F1E9	\$F1EA	\$F1EB	\$F1EC	\$F1ED	\$F1EE	\$F1EF	\$F1F0	\$F1F1	\$F1F2	\$F1F3	\$F1F4	\$F1F5	\$F1F6	\$F1F7	\$F1F8	\$F1F9	\$F1FA	\$F1FB	\$F1FC	\$F1FD	\$F1FE	\$F1FF	\$F200	\$F201	\$F202	\$F203	\$F204	\$F205	\$F206	\$F207	\$F208	\$F209	\$F20A	\$F20B	\$F20C	\$F20D	\$F20E	\$F20F	\$F210	\$F211	\$F212	\$F213	\$F214	\$F215	\$F216	\$F217	\$F218	\$F219	\$F21A	\$F21B	\$F21C	\$F21D	\$F21E	\$F21F	\$F220	\$F221	\$F222	\$F223	\$F224	\$F225	\$F226	\$F227	\$F228	\$F229	\$F22A	\$F22B	\$F22C	\$F22D	\$F22E	\$F22F	\$F230	\$F231	\$F232	\$F233	\$F234	\$F235	\$F236	\$F237	\$F238	\$F239	\$F23A	\$F23B	\$F23C	\$F23D	\$F23E	\$F23F	\$F240	\$F241	\$F242	\$F243	\$F244	\$F245	\$F246	\$F247	\$F248	\$F249	\$F24A	\$F24B	\$F24C	\$F24D	\$F24E	\$F24F	\$F250	\$F251	\$F252	\$F253	\$F254	\$F255	\$F256	\$F257	\$F258	\$F259	\$F25A	\$F25B	\$F25C	\$F25D	\$F25E	\$F25F	\$F260	\$F261	\$F262	\$F263	\$F264	\$F265	\$F266	\$F267	\$F268	\$F269	\$F26A	\$F26B	\$F26C	\$F26D	\$F26E	\$F26F	\$F270	\$F271	\$F272	\$F273	\$F274	\$F275	\$F276	\$F277	\$F278	\$F279	\$F27A	\$F27B	\$F27C	\$F27D	\$F27E	\$F27F	\$F280	\$F281	\$F282	\$F283	\$F284	\$F285	\$F286	\$F287	\$F288	\$F289	\$F28A	\$F28B	\$F28C	\$F28D	\$F28E	\$F28F	\$F290	\$F291	\$F292	\$F293	\$F294	\$F295	\$F296	\$F297	\$F298	\$F299	\$F29A	\$F29B	\$F29C	\$F29D	\$F29E	\$F29F	\$F2A0	\$F2A1	\$F2A2	\$F2A3	\$F2A4	\$F2A5	\$F2A6	\$F2A7	\$F2A8	\$F2A9	\$F2AA	\$F2AB	\$F2AC	\$F2AD	\$F2AE	\$F2AF	\$F2B0	\$F2B1	\$F2B2	\$F2B3	\$F2B4	\$F2B5	\$F2B6	\$F2B7	\$F2B8	\$F2B9	\$F2BA	\$F2BB	\$F2BC	\$F2BD	\$F2BE	\$F2BF	\$F2C0	\$F2C1	\$F2C2	\$F2C3	\$F2C4	\$F2C5	\$F2C6	\$F2C7	\$F2C8	\$F2C9	\$F2CA	\$F2CB	\$F2CC	\$F2CD	\$F2CE	\$F2CF	\$F2D0	\$F2D1	\$F2D2	\$F2D3	\$F2D4	\$F2D5	\$F2D6	\$F2D7	\$F2D8	\$F2D9	\$F2DA	\$F2DB	\$F2DC	\$F2DD	\$F2DE	\$F2DF	\$F2E0	\$F2E1	\$F2E2	\$F2E3	\$F2E4	\$F2E5	\$F2E6	\$F2E7	\$F2E8	\$F2E9	\$F2EA	\$F2EB	\$F2EC	\$F2ED	\$F2EE	\$F2EF	\$F2F0	\$F2F1	\$F2F2	\$F2F3	\$F2F4	\$F2F5	\$F2F6	\$F2F7	\$F2F8	\$F2F9	\$F2FA	\$F2FB	\$F2FC	\$F2FD	\$F2FE	\$F2FF	\$F300	\$F301	\$F302	\$F303	\$F304	\$F305	\$F306	\$F307	\$F308	\$F309	\$F30A	\$F30B	\$F30C	\$F30D	\$F30E	\$F30F	\$F310	\$F311	\$F312	\$F313	\$F314	\$F315	\$F316	\$F317	\$F318	\$F319	\$F31A	\$F31B	\$F31C	\$F31D	\$F31E	\$F31F	\$F320	\$F321	\$F322	\$F323	\$F324	\$F325	\$F326	\$F327	\$F328	\$F329	\$F32A	\$F32B	\$F32C	\$F32D	\$F32E	\$F32F	\$F330	\$F331	\$F332	\$F333	\$F334	\$F335	\$F336	\$F337	\$F338	\$F339	\$F33A	\$F33B	\$F33C	\$F33D	\$F33E	\$F33F	\$F340	\$F341	\$F342	\$F343	\$F344	\$F345	\$F346	\$F347	\$F348	\$F349	\$F34A	\$F34B	\$F34C	\$F34D	\$F34E	\$F34F	\$F350	\$F351	\$F352	\$F353	\$F354	\$F355	\$F356	\$F357	\$F358	\$F359	\$F35A	\$F35B	\$F35C	\$F35D	\$F35E	\$F35F	\$F360	\$F361	\$F362	\$F363	\$F364	\$F365	\$F366	\$F367	\$F368	\$F369	\$F36A	\$F36B	\$F36C	\$F36D	\$F36E	\$F36F	\$F370	\$F371	\$F372	\$F373	\$F374	\$F375	\$F376	\$F377	\$F378	\$F379	\$F37A	\$F37B	\$F37C	\$F37D	\$F37E	\$F37F	\$F380	\$F381	\$F382	\$F383	\$F384	\$F385	\$F386	\$F387	\$F388	\$F389	\$F38A	\$F38B	\$F38C	\$F38D	\$F38E	\$F38F	\$F390	\$F391	\$F392	\$F393	\$F394	\$F395	\$F396	\$F397	\$F398	\$F399	\$F39A	\$F39B	\$F39C	\$F39D	\$F39E	\$F39F	\$F3A0	\$F3A1	\$F3A2	\$F3A3	\$F3A4	\$F3A5	\$F3A6	\$F3A7	\$F3A8	\$F3A9	\$F3AA	\$F3AB	\$F3AC	\$F3AD	\$F3AE	\$F3AF	\$F3B0	\$F3B1	\$F3B2	\$F3B3	\$F3B4	\$F3B5	\$F3B6	\$F3B7	\$F3B8	\$F3B9	\$F3BA	\$F3BB	\$F3BC	\$F3BD	\$F3BE	\$F3BF	\$F3C0	\$F3C1	\$F3C2	\$F3C3	\$F3C4	\$F3C5	\$F3C6	\$F3C7	\$F3C8	\$F3C9	\$F3CA	\$F3CB	\$F3CC	\$F3CD	\$F3CE	\$F3CF	\$F3D0	\$F3D1	\$F3D2	\$F3D3	\$F3D4	\$F3D5	\$F3D6	\$F3D7	\$F3D8	\$F3D9	\$F3DA	\$F3DB	\$F3DC	\$F3DD	\$F3DE	\$F3DF	\$F3E0	\$F3E1	\$F3E2	\$F3E3	\$F3E4	\$F3E5	\$F3E6	\$F3E7	\$F3E8	\$F3E9	\$F3EA	\$F3EB	\$F3EC	\$F3ED	\$F3EE	\$F3EF	\$F3F0	\$F3F1	\$F3F2	\$F3F3	\$F3F4	\$F3F5	\$F3F6	\$F3F7	\$F3F8	\$F3F9	\$F3FA	\$F3FB	\$F3FC	\$F3FD	\$F3FE	\$F3FF	\$F400	\$F401	\$F402	\$F403	\$F404	\$F405	\$F406	\$F407	\$F408	\$F409	\$F40A	\$F40B	\$F40C	\$F40D	\$F40E	\$F40F	\$F410	\$F411	\$F412	\$F413	\$F414	\$F415	\$F416	\$F417	\$F418	\$F419	\$F41A	\$F41B	\$F41C	\$F41D	\$F41E	\$F41F	\$F420	\$F421	\$F422	\$F423	\$F424	\$F425	\$F426	\$F427	\$F428	\$F429	\$F42A	\$F42B	\$F42C	\$F42D	\$F42E	\$F42F	\$F430	\$F431	\$F432	\$F433	\$F434	\$F435	\$F436	\$F437	\$F438	\$F439	\$F43A	\$F43B	\$F43C	\$F43D	\$F43E	\$F43F	\$F440	\$F441	\$F442	\$F443	\$F444	\$F445	\$F446	\$F447	\$F448	\$F449	\$F44A	\$F44B	\$F44C	\$F44D	\$F44E	\$F44F	\$F450	\$F451	\$F452	\$F453	\$F454	\$F455	\$F456	\$F457	\$F458	\$F459	\$F45A	\$F45B	\$F45C	\$F45D	\$F45E	\$F45F	\$F460	\$F461	\$F462	\$F463	\$F464	\$F465	\$F466	\$F467	\$F468	\$F469	\$F46A	\$F46B	\$F46C	\$F46D	\$F46E	\$F46F	\$F470	\$F471	\$F472	\$F473	\$F474	\$F475	\$F476	\$F477	\$F478	\$F479	\$F47A	\$F47B	\$F47C	\$F47D	\$F47E	\$F47F	\$F480	\$F481	\$F482	\$F483	\$F484	\$F485	\$F486	\$F487	\$F488	\$F489	\$
--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	----



This guy closed 3000 volumes of data and sold it on eBay for \$ 35.



Parameter of what Bierner has printed.

Thời gian hiển thị trên màn hình: 2 giây

Số khung hình: 120

Số trang: 2950, với kích cỡ 215.9 x 279.4 mm, in 2 mặt

Mỗi trang có 4 cột

Font chữ của tác vụ là 6pt

Số tờ giấy: 1473

Dùng hết 3 tập tài liệu để đựng

Số tác vụ: 1.123.969

Trung bình 9750 tác vụ/khung hình

Bierner used a software emulator to be able to play old games on the PC platform and a software track the task so that he could know what the CPU had to handle with each frame. At the same time, to take a frame-by-frame screenshot and then convert the raw data into text, he must use another software.

Matt Bierner posted all the tools he used to complete this project on GitHub so anyone who wanted could make a similar product. If you want to learn more about them, you can visit the link below.

<https://github.com/mattbierner/two-seconds-super-mario-bros-3>

See more:

1. Super Mario Bros. "Island break" player For nearly 5 minutes, set a new world record
2. How will play Super Mario at 380,000 frames per second?
3. Play Mario with augmented reality technology right on the street

You finished reading the article "**In the CPU tasks that Mario had to handle in the first two seconds of 1988, the programmer obtained 3000 sheets of paper**" edited by the [TipsMake](#) team. We hope this article has provided you with many useful tech tips and tricks. You can search for similar articles on tips and guides. Thank you for reading and for following us regularly.