

Free Software and Computer Music: Beyond Linux

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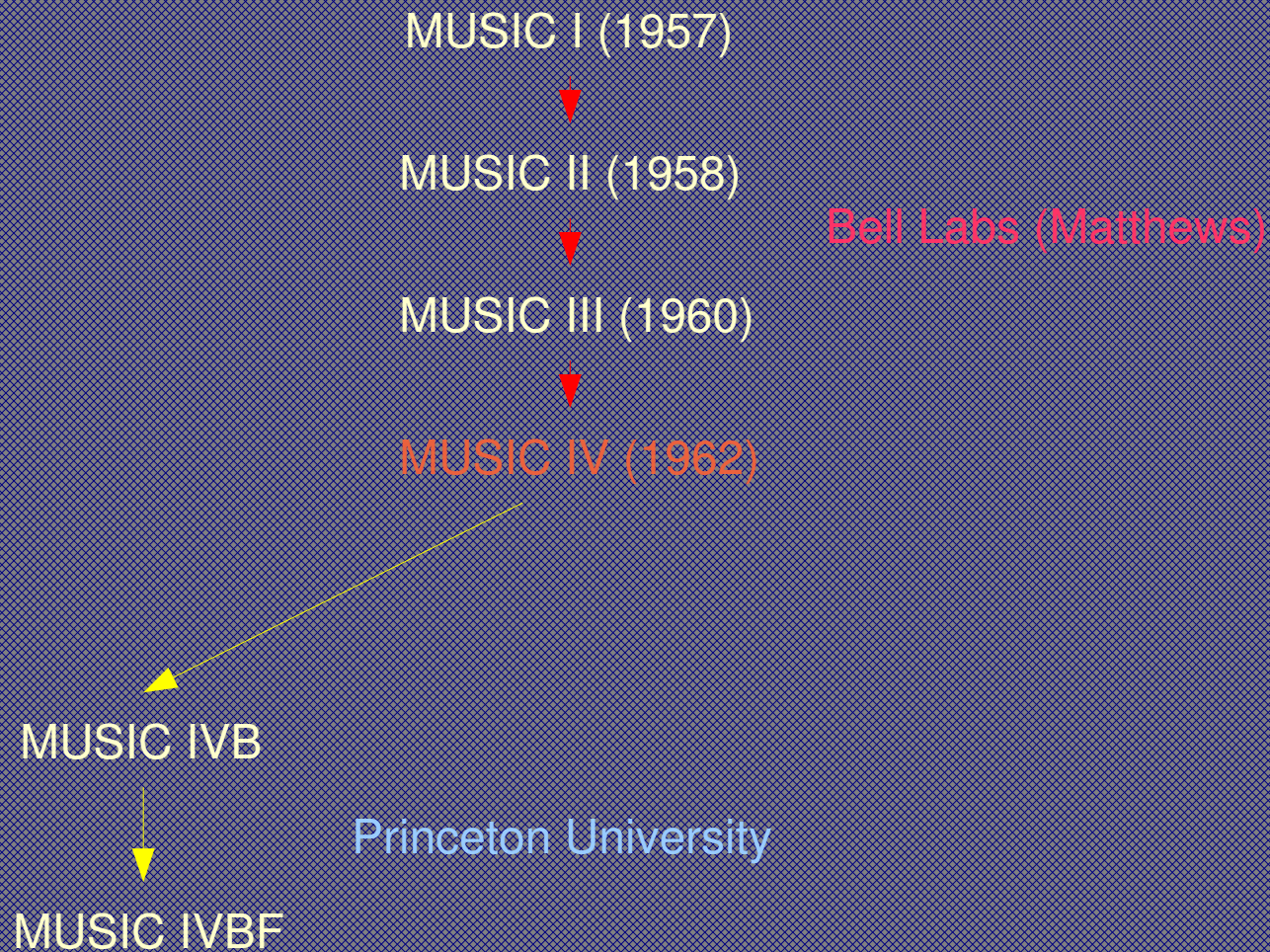
Introduction

- The Linux Revolution: sweeping across the UNIX world, from mobile phones to supercomputers
- Linux is but a component of the big Free Software picture
- FS is now a part of everyday life

Music Systems: free at birth

- Music systems have historically been FS before the concept became part of our vocabulary
- The development of Computer Music was intrinsically linked to this concept
- The Music *N* family of computer music languages is a good example of it

Music N family tree



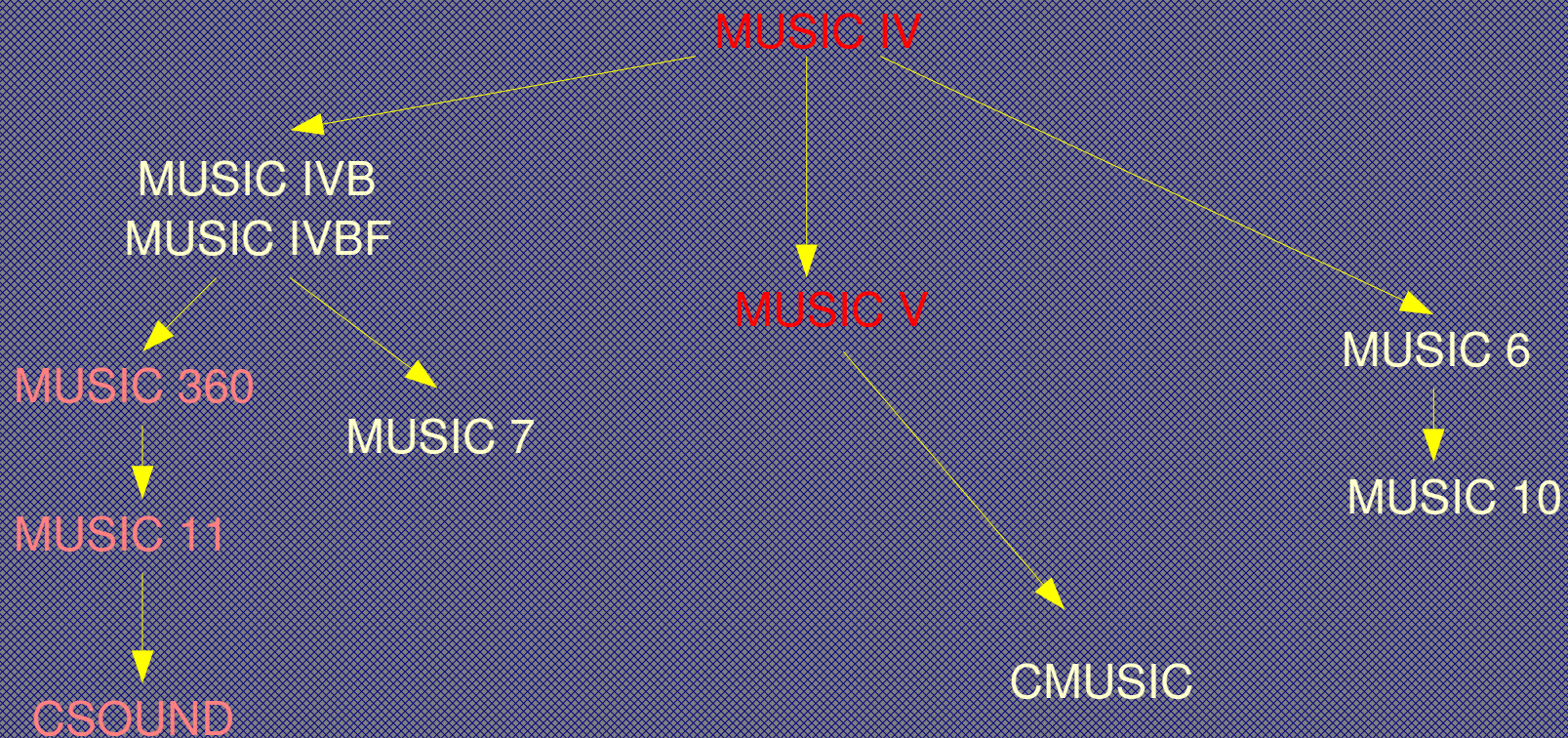


IBM 704: MUSIC I & II



IBM 7094: MUSIC III & IV

Music N family tree (grandchildren)





IBM 360: MUSIC 360



PDP 11: MUSIC 11

The *learning* factor

- Generations of Computer Music people have learned from these programs
- Many of them were available from the internet
- Building and messing around with them was a very useful educational experience for many people

The Composer's Desktop Project

- Formed by a group of like-minded individuals to provide an affordable platform for computer music
- Atari ST-based, running software created by the group, plus other things like cmusic and csound
- In a smaller scale, reminiscent of what goes on now in the Linux audio community

Csound

- Easily available, its user base and popularity grew significantly since it was first released in 1986
- The product of a large development community, coordinated by John ffitch at Bath University
- Licensing issues had to be solved and now it is released under LGPL
- FS not only in that the C source code is available, but also a large collection of csound code is around

One Laptop Per Child

- The OLPC project is an initiative, started at the MIT, to research and deliver a \$100 laptop.
- OLPC is now a non-profit organisation dedicated to the development of the machine.
- The target public are children, from different countries, mainly from the developing world.
- The idea is to provide a tool for education through exploration and expression (constructionist learning)



Basic specs:

500 MHz AMD

0.5 Gb flash memory (no hard-disk)

128 Mb RAM

7-inch screen

Wireless ethernet

USB

ADI 1888 audio encoder/decoder

GNU/Linux (X-Windows + Gnome, most likely)

Music and Sound on OLPC

- The laptop should be:
 - An instrument that can be played (keyboard, mouse etc)
 - A tool for exploration of music and sound
 - A network-interactive instrument ('orchestras of interconnected laptops')
- The plan so far:
 - Csound as the sound/music server
 - 'universal orchestra' for all purposes
 - Applications would connect to the server as they require
 - Work on UI is a crucial aspect, providing accessibility and 'open doors'

Learning Curve Issues

Computer music as a field has been likened to a building with a sign on it saying "Best Eats in Town".

Many people go into this building expecting to find an elegant restaurant with a parchment menu, formidable wine list, and pleasant, efficient, even charming service. What they find instead, to their surprise, is a shiny, enormous, extremely modern kitchen, with abundant supplies of every kind of foodstuff in voluminous, refrigerated storage.

Indeed, the "Best Eats in Town" are available here, but only to those willing to learn to cook!

F. R. Moore, 1983

Conclusion

- FS is an open door, whether or not on top of and/or cohabiting with other FS
- Initiatives like OLPC should make it more available to a wider public
- Developing for Linux is important, developing FS for as many platforms as possible is even more
- All open doors will be leading to Free Music, Free Art, Free Learning, Free Ideas...