

Hurdles and Benefits of Introducing Linux as a Viable Digital Audio Workstation in the Academic Environment

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Why bother?

- **Common arguments:**
  - “I use Linux for my own sake...”
  - “Linux has done well without it...”
  - “Linux does not need wide(r) audio user-base...”
- **Other Considerations:**
  - Is Linux mature enough to be used by non-tech savvy users?
    - Does this even matter?
  - What are we trying to achieve?

Why not?

Increased User-Base

Increased Exposure

Attention From Commercial Vendors

Increased Pool of Contributors

Greater Software Offering

Why not?

Increased User-Base

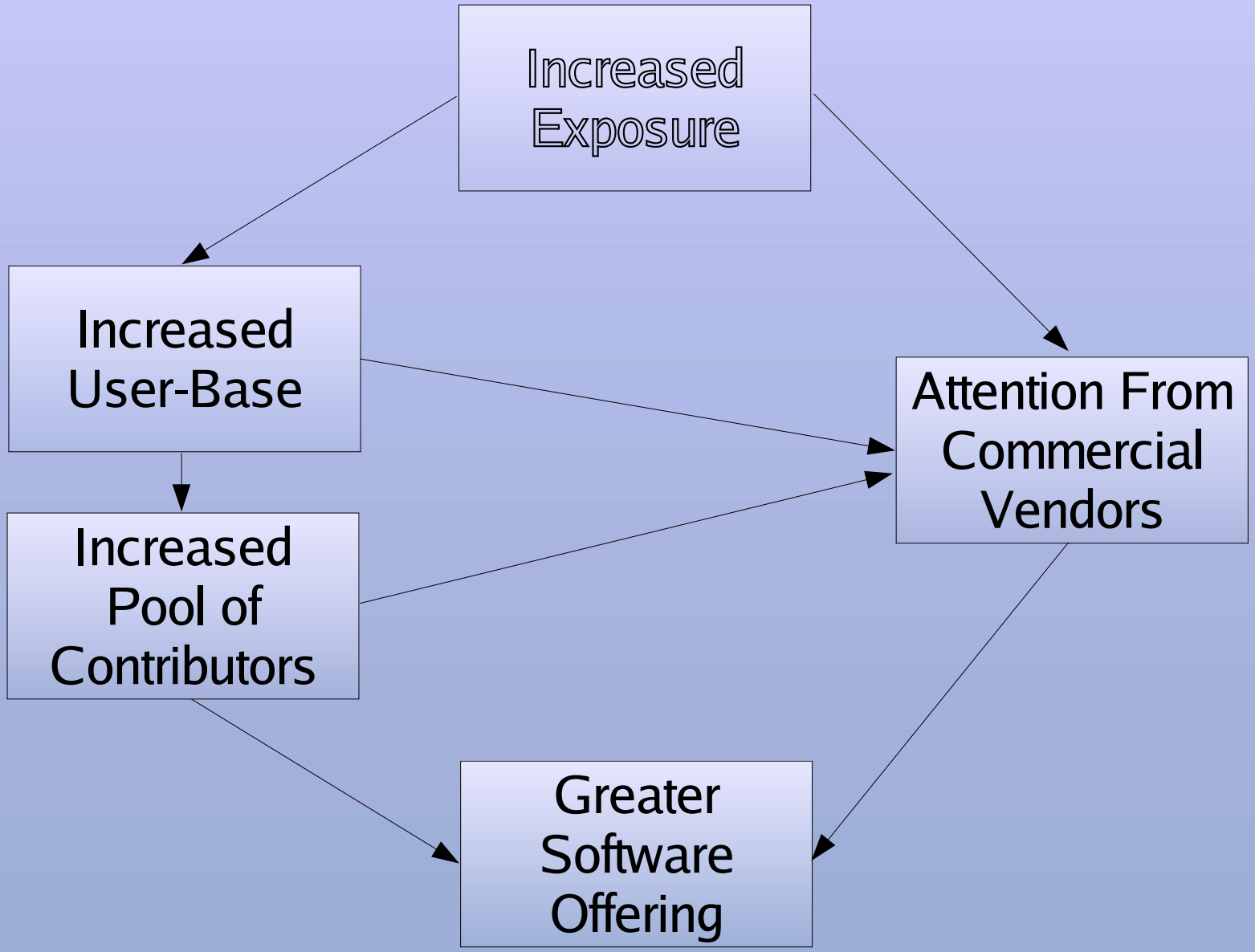
Increased Exposure

Attention From Commercial Vendors

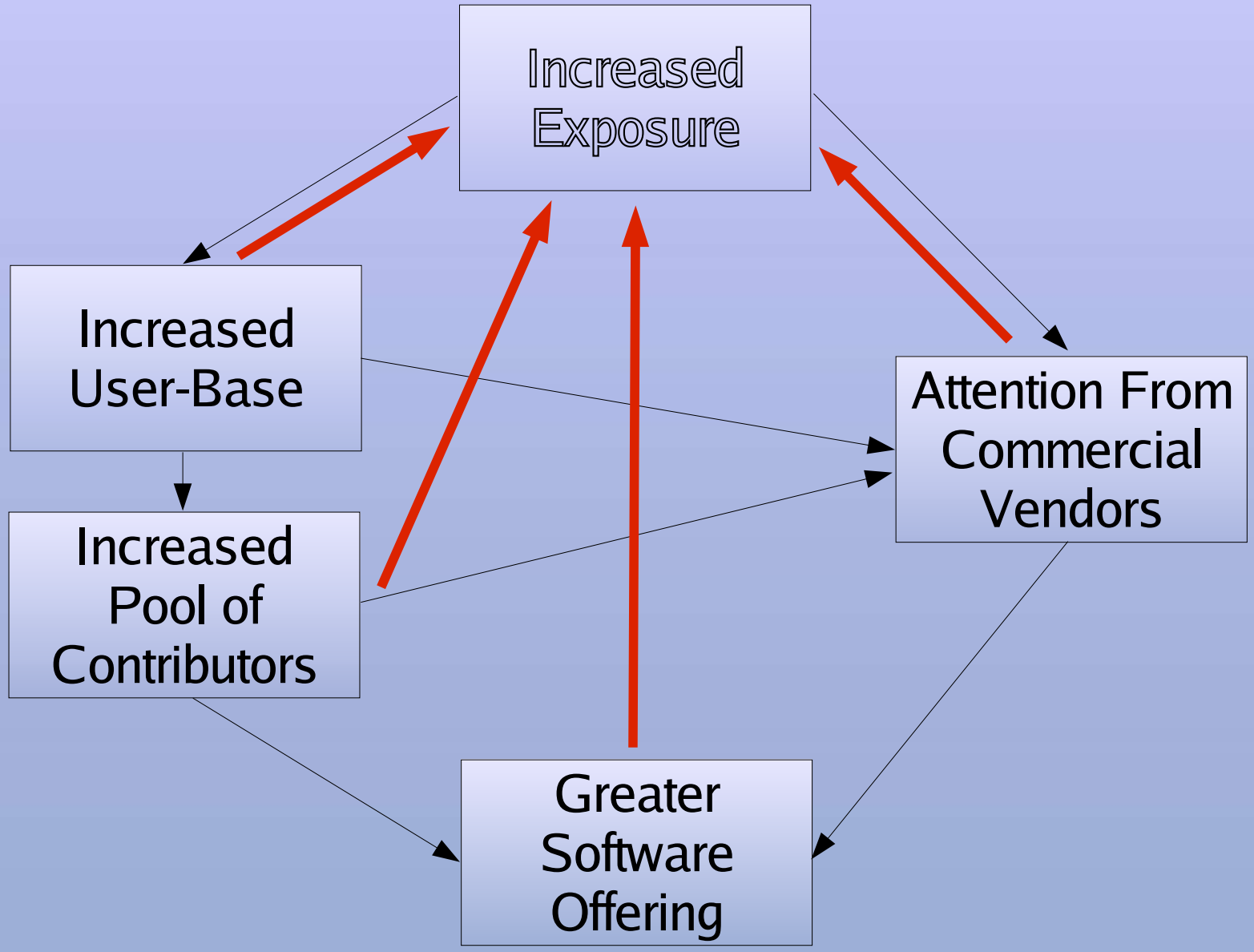
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Why not?


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Why not?

- **Observations:**
  - Commercial incentives are high-risk pursuits
  - Increased user-base/contributors and the attention from commercial vendors are considered to be “reactionary” parameters
  - Intervention is needed to alter the self-perpetuating trend

- **Conclusion:**
  - The only active parameter we can affect with the least amount of risk and/or effort is “increased exposure”

Increased Exposure

- **Observations:**
  - Increasing presence of Linux among common partially-computer-literate users may backfire
  - Evangelizing Linux among neutral parties is unpredictable
  - “Installathons” may bring wrong kinds of impressions about the OS depending upon the experience
  - Conferences are quite potent in terms of outreach but also often tend to be “inbred” in terms of its audience

- **Conclusion:**
  - The RIGHT kind of intervention is needed

Increased Exposure

- **Observations:**
  - Need to target highly-educated individuals whose future careers will remain in contact with audio technology
  - Need to target those individuals while they are still eager to learn
  - Need to expose potential adopters to the already deployed Linux environment
- **Conclusion:**
  - Higher-level educational institution is the prime environment for such exposure

Academic Environment

- **Observations:**
  - Students are less likely to question platform choices of academic electroacoustic studios
  - Students are more concerned with their liberties and rights
  - Current studios inadvertently impose particular OS due to software preference, however:
    - Software interfaces are becoming more and more alike
    - With computers becoming more affordable, studio equipment is slowly losing its relevance/importance

Personal Experiences

- **Hurdles:**
  - Steep install curve before ease-of-use is achieved
    - Fragmentation of the distributions/installation packages
    - Requires increased software/system support
  - Current state of particular hardware support
  - Inability to comprehend the true meaning of GPL/OSS/Free software
    - Proper contextualization of *Apple's OS X*
  - Wrong expectations set by unrealistic claims/statements
  - Huge amount of misinformation regarding Linux

Personal Experiences

- **Hurdles (cont.):**
  - Unifying layers that provide interoperability and increased ease of use in complex setups
  - Documentation!!!
- **And Other Random Thoughts:**
  - Lack of commercial success/support fuels skepticism
  - Lack of apparent economic “value” in the open source software

Promoting Linux

- **Alleviating the “Steep Curve” & Support Fragmentation**
  - Preinstalled machines in the studio
  - Workshops and/or classes that address Linux installation and maintenance
    - Adjusting content to the needs of students
  - Unified architecture and/or distribution
  - Other

Promoting Linux

- **Solving Hardware Support Issues**
  - Linux, like any other system cannot be guaranteed to work with every hardware
  - Preliminary research and preparation is critical
  - Provide a list of accepted computers and/or devices
  - Other (many aspects depend upon the efforts of the overall Linux audio community)

Promoting Linux

- **Understanding GNU/GPL/OSS & Establishing Value**
  - In-depth overview of the freedom Linux offers
    - Free as in “free beer” vs. free as in “free speech”
    - Focus on practical aspects (i.e. How does this affect me as an artist?)
    - Assigning the software value through its practical implications (intellectual, artistic, monetary)
  - Careful comparison of Linux and *OS X*
  - Use of practical examples (i.e. obsoleted software, platforms and/or lack of software support)
  - Encouraging behavior that fosters Linux progress
    - Bug reporting
    - Active life within the community
  - Other

Promoting Linux

- **Avoiding Establishment of Wrong Expectations**
  - Non-aggressive promotion of Linux
    - Acceptance and acknowledgment of alternative tools/platforms
  - Spend as much time on caveats as on the benefits
  - Always expect [and be prepared for] the worst-case scenario
  - Being realistic pays off in the long run
  - “Overly optimistic” often equals “unrealistic”
  - Other

Promoting Linux

- **Staying Informed**
  - Mailing lists, forums, and journals
  - Conferences, performances, and other venues
  - Requires accessible and easy way to update software
  - Ability to speak intelligently about a broad spectra of Linux-related topics
  - Ability to debunk FUD

Promoting Linux

- **Documentation?**
  - Need I say more?

Other Considerations

- Need for increased literary presence
  - More coherent annotation of Linux multimedia successes
  - Documentation/Books
- Campaigns/programs that focus on increasing the visibility of Linux
  - Promos, banners, commercials
    - “Made in Linux”
    - “Powered by Linux”
- Bridging various audio layers/software/functionality
- Focus on generating a visually appealing desktop and/or application interface
- Refocusing community energy onto a single audio distribution in order to alleviate support overhead

Conclusion(s)

- Increased presence of Linux in higher education is critical for its wider adoption in the multimedia world
- Linux as a multimedia OS has a unique potential that largely remains unexploited due to lack of exhaustive information/documentation
- Most of the hurdles that stand in the way of Linux adoption in the academic studios are relatively easy to circumvent via the appropriate (and usually affordable) restructuring of the curriculum and/or studio facilities
- Remaining problems require urgent attention of the entire Linux Audio community
- Benefits of successful increased exposure are well worth the effort and should be pursued whenever possible



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