3rd Party Software
Readings

Nothing in the texts 😞

References:
- http://www.opensource.org/
- http://www.gnu.org
Outline

3rd party software
  o What is it?
  o Why use it – what are the benefits?
  o And what are the costs?
  o Activity – what path would you choose and why?
What is 3rd party software?

Software produced by someone/organization outside your company, for a broad set of consumers

Can you name some examples?

Student Activity
Why use 3rd party software?

Can you think of 3 reasons?

1.

2.

3.

Student Activity
Why use 3rd party software?

- Did you catch these?
  - Function exists, why reinvent the wheel
  - Less development time
  - Less development cost
  - Requested by customers
  - Others have expertise
  - Others contribute to the support and evolution
How can we use it?

1. As a tool in the product development process:
   Examples from your project development?

2. As part of a product being shipped:
   Examples from your products?
What types of 3rd party software are there?

- Commercial software
  - Developed, distributed and maintained under a licensing agreement with a vendor, generally for a fee
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  - Copyright is retained by the author
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- Public domain software
  - Total absence of copyright protection
  - Anyone can copy, modify or use it in any way they wish

- Others: freeware, shareware, … [tools] (not source)
Costs of 3\textsuperscript{rd} party software [in your product]

1. Be very aware of the intellectual property rights associated with the software, such as:
   - Copyright
   - Patent
   - Trade Secret
   - Trademarks
   - License

We’ll talk more about these Monday

Ask:
- Do you have the right to use the software?
- Is it important to protect some IP you’re adding?
- Do the IP rights allow you to do this?
More hidden costs

2. Take into account integration costs
   - Rarely does the software do exactly what you need it to
   - Typically there is some integration that must occur, and some expertise that must be built inhouse

3. Consider whether additional testing and/or robustification is needed
   - You’re ultimately responsible

4. Don’t forget to plan for updates
   - How will you incorporate updates of the 3rd party software into your version of it?
Case Study: License

Require a `strcpy()` function for your product’s proprietary libc
Consider a BSD libc routine and a glibc routine

- **BSD license –** *generous*
  - *No requirement to distribute your modified source code*
  - Source redistribution requires copyright notices and disclaimers
  - Binary distribution requires copyright notice and disclaimers in the documentation.

- **GPL license –** *infectious*
  - *Source must be made available to customers who request it*
  - *Your modifications must be included with the source*
  - *All code “affected” by GPL code must also be distributed under GPL*

Which would you choose?
Your scenario

You’re developing a whiz bang scoresheet for the Olympics. You need a widget package to use for the displays. You have a number of displays, and you want the result to be polished. You have $100k for the total development effort, which needs to be done in 3 months. Your choices are:

- **WigiBigBlue** - commercial package – has everything you want but costs $30k to license to distribute with your product
- **WigiDiva** – provided by a university – has all but one function you need, source distributed under BSD license
- **WigiHomeBrew** – roll your own
What path would you choose?

Your choice:  BigBlue    Diva    HomeBrew

Assumptions:

Factors:

Student Activity
Did your factors include…

- Talent of your team (any widget experts?)
- Maintenance costs and availability of your team’s time to do this
- IP of a package being valuable
In summary

- 3rd party software is good!

- 3rd party software, in particular those used in your company products, has costs and/or restrictions that must be understood before committing to their use.

What are the implications of the 3rd party software you used in your product?