

Cross-Development as a Service

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Cross-Development as a Service

Outline

- What is cross-platform development
- Practical aspects of cross-development
- Cross-development as a service
- Service benefits
- Technical challenges
- Software distribution
- Conclusions
- Q&A

Cross-Platform Development

- Software is developed on one platform to be executable on the other(s).
 - Different OS (or no OS at all)
 - Different hardware
- May require additional tools such as compilers
- May require entire build environments with tools, libraries, other applications
 - sandbox approach
 - Symbian SDKs

Practical Aspects

- Tools
 - Increases productivity, decreases time to market
 - Embedded software development is not well supported yet
- Community
 - Knowledge accumulation and sharing
 - Large pool of 3rd party resources
- Division of labor
 - Effective use of expert knowledge and
 - Reduced efforts redundancy

Cross-Development as a Service

- Client-Server approach to building
- External building environment
 - May serve many clients
 - Maintained by experts
 - May incorporate version control
 - Could be used as a basis for cooperative development
- Modular software assembly
 - Sources pulled from different locations
 - Ideal for cross-platform software distribution

Service Benefits

- Ready cross-development environments for different targets (hence, cost savings on the setup)
- Easy switching between targets with low additional cost on labor
- Low demand on the client's processing power
- Operating system independent
- Access from anywhere on the Internet

Technical Challenges

- Multitude of target systems
 - Per-request initialization overhead
 - Possibility to add/modify targets
- Remote building
 - Error reporting
 - Data transfer delays
- Real world service
 - Reliability in order to be successful
 - Security considerations

Software Distribution

- A good real-life application area for the cross-development service
 - Many different targets
 - Large community participation
 - Distributed delivery/hosting
 - Environment setup delays are acceptable
- Security is less challenging
- Gradual deployment is possible
- Timing is less critical

Conclusions

- Tools and community are important for software development
- Cross-Development service may hold many benefits for the developers
- Service could be scaled from team/company-wide to Internet-wide
- On large scale service is well suited for software distribution
- Use for development may be impacted by the number of technical limitations

Q&A

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