



Boeing-MSX Software Campus License Server

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Boeing-MSOFTWARE Campus License Server



- **In 2002 Boeing moves from Enterprise wide node-locked and floating licenses to Enterprise wide token based license serving.**
- **Reduction in internal contractual paperwork.**
- **Reduction in costs both to MSOFTWARE and Boeing by eliminating internal paperwork and effort as new requirements arise.**



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- **Additional Token-Serving Payoffs:**
 - **Flow time associated with new requirements is greatly reduced**
 - **Reduction in costs and flow time due to electronic delivery of applications and updates**



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- **Access to additional capability**
- **Easy transfer of tokens**
- **Internal and External paperwork reduced when transferring**
- **Access codes provide tracking for current and estimated future costs**



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License Usage & Tracking Issues

- Usage Tracking Requirements
- Tracking Mechanisms
- Reserve Tokens for Rapid Response
- Successes and Problems
- Lessons learned



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Usage Tracking Requirements

- **Corporate Charging System
Used To Allocate Costs**
- **Tracking Is Done by Site and Project**
- **Internal Cost Allocation Codes
Were Created and Implemented**



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Usage Tracking Mechanisms

- **C.O.T.S. License Usage Software**
Used For Official Accounting
- **Token Counting Scripts Used for Initial**
and Back-up Data Gathering
- **Unix “cron” Jobs Record Usage**
Every 15 Minutes



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Reserve Tokens For Rapid Response

- **Token “Reserve” Is Utilized As Buffer**
- **Reserves Are Implemented Only With Management Team Approval**
- **Fast Response To High Usage Demand Spikes Is Possible**



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Successes and Problems (1 of 2)

- **Licensing Outages
(Rare, but Impacting)**
- **Outage Reports Are Immediate
(Cell & Beeper Notification)**
- **Administrator Group Is Small**



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Successes and Problems (2 of 2)

- **C.O.T.S Report vs. Token Counting
Discrepancies Took Time and
Experience to Trust**
- **Token Counting Data Are
For Back-up (Fill-in)**



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Lessons Learned (1 of 2)

- **Follow C.O.T.S. Licensing Guidelines
(Server Inter-Communication)**
- **Administrators Must
Communicate Effectively**



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Lessons Learned (2 of 3)

- **License Usage “Rules” Must Be Imposed**
- **“Licenses Available” Tools Should Be Given To Users**
- **Automatic License Start-up Scripts May Ease Administrator Burdens**



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Lessons Learned (3 of 3)

- **Instant-Checks = Immediate Hog Control**
- **Monthly Usage Checks Highlight Hogs**
- **Metric Data Can Be Mined To
Demonstrate Frequency and
Duration of Product Usage**