

Oregon Department of Transportation

PC Lifecycle Management Program

PC Lifecycle Replacement 03-05

P270S STRATEGY FOR 03-05 - SUMMARY

DMR Macroscopic™

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1. Overall Implementation Strategy - Summary

One of ODOT's key strategies is to continue to increase the efficiency of its internal operations in order to make more funding available to Oregon's transportation system. In order for PC purchasing to be efficient, predictable, and manageable this strategy for PC Lifecycle Management was developed.

The cost of PCs are considered standard infrastructure costs and are generally budgeted at high organization levels within the various businesses following a standard PC replacement cycle, based on current inventory information.

1.1 Scope

PC Lifecycle Management Program includes, per the replacement schedule listed below, the following:

- Replacement PCs and monitors
- Core software (Microsoft operating system, Office Suite, Back-Office client license)

1.2 Outside of Scope

The following items are not included in the above and must be budgeted for separately within section or unit budgets:

- Computing needs for new additional FTE, new unanticipated programs, and broken or stolen/lost situations
- Additional software (other than core software listed above)
- Hardware components other than the standard (i.e., additional hard drives, memory, second processors, etc.) See:
<http://intranet.odot.state.or.us/itpam/Documents/Standards%20List/Hwstds.xls>
- Adding a second PC for an employee (i.e., a laptop and a desktop)
- Printers
- Servers
- Network
- Personal Digital Assistants (PDAs)

1.3 ODOT PC Replacement Cycle

The PC Replacement and Acquisition Procedure and the PC Replacement Standard are located in the IS Library. The Procedure outlines the steps that this strategy document will follow for the 03-05 biennium. The strategy for 03-05 will start with preparation of the operational plan. This step was not done during the 03-05 budget-planning phase because of the uncertainty of what budget levels would be for 03-05.

The Standard identifies how candidates for replacement will be selected this biennium. This selection criterion is usually based on some combination of processor speed and device age. The ideal is to replace the same number of devices each year, giving a fixed rate of replacement. This ideal is determined by research of industry standards for useful PC life and technology churn rate. The ideal is then adjusted based on Community of Interest-wide usage characteristics, budget constraints, and specific needs. These usage characteristics are described in section 1.4.

For the 03-05 biennium, the PC Lifecycle Management Team recommends the following useful life span for desktops and laptops:

- | | |
|-------------------------|---------|
| ➤ Structured Task | 5 years |
| ➤ Business Standard | 4 years |
| ➤ Technical Workstation | 3 years |

These recommendations are based on two articles from Gartner. Enterprise Desktop Recommendations: 1H03 Update, published 3/25/03, states, “. . . we recognize that most IS organizations are adopting desktop PC life cycles that are at four years (and are getting longer) for mainstream users; Gartner continues to recommend four years for desktop refresh for mainstream users.”

Notebook Market Predictions, 2003, published 11/4/02, states, “Enterprises should include 802.11b interfaces in all their new notebook purchases. Even if wireless LANs are not installed in the enterprise, public hot spots can help make mobile workers more productive. Furthermore, there is a strong likelihood of 802.11 implementation in the enterprise within the three-year useful life of the notebook.”

Prior Gartner articles have placed a shorter life span on notebook devices compared to desktops because of higher failure rates due to rougher handling. ODOT problem ticket information does confirm that the problem rate for laptops is double that of desktop PCs. However, the lack of detail available about these problems makes it impossible to determine if this increased rate is age related. As the new Asset Management system is put into operation, there should be efforts made to tie problems to a specific unit so that this analysis can be made in the future. Until the analysis is completed, a four-year useful life is recommended.

Due to budget constraints, the team recommends deviating from the Gartner model for the structured task devices by stretching the useful life to five years.

The four-year useful life is too long for some technical users who need to push the envelope to get speed and functionality for compute-intensive work like engineering. The team recommended a three-year lifecycle for these units. This does not imply that a technical unit would be surplus after three-years. Instead it will be recycled to a standard business user.

1.4 PC Usage Characteristics

Structured Task Usage - Basic, simple office functionality (e.g. Point of Sale PCs only needing mainframe connectivity, possibly some simple word processing or spreadsheet use, and perhaps e-mail).

Business Standard Usage – Common office functionality (e.g. Outlook and MS Office Professional to communicate and increase personal productivity).

Technical Workstation Usage – Power-users requiring technical high-end capability (e.g. engineers, financial analysts, developers, or specialized application users).

1.5 Standard Hardware Configurations

The current hardware/software standard configuration is accessible from the Information Systems web page on the Intranet. These configurations are repeated in Appendix A. of this document. There are three desktop and three laptop configurations offered currently. These configurations may be customized for specific needs.

(<http://intranet.odot.state.or.us/itpam/Documents/Standards%20List/Hwstds.xls>)

1.5.1 Desktop Configurations as of August, 2003

Mini-tower Business Workstation – This is a 2.4 GHz, Dell GX270 with 512MB DDR-SDRAM configured with a DVD and no floppy drive. The decision was made not to offer a floppy drive because this is the direction vendors are going. Just as the larger, more flimsy floppy disks were phased out, the smaller, “stiffy” disks are being replaced by CD and DVD disks. This is the unit that will be acquired for most situations. Cost for this workstation is under \$850.

Small Form Factor Business Workstation – This 2.4 GHz, Dell GX270 with 512MB DDR-SDRAM is for users needing a smaller footprint, such as DMV counter machines. This unit has no additional PCI slots, so expandability is restricted. There is less than a dollar difference between the two Business Workstation configurations.

Technical Workstation – This is a 3.2 GHz, Dell GX270 with 1GB DDR-SDRAM. It has an upgraded video card and a combination CD & DVD-CDRW. This configuration does not have a floppy drive. This unit would be purchased for computer-intensive work like engineering. This configuration costs under \$1500.

1.5.2 Laptop Configurations as of August, 2003

Business Lightweight Laptop – This is a 1.60 GHz, Dell Latitude D600 with 512 MB DDR-SDRAM that weighs under 5 lbs and is less than 1.5 inches thick. It has 2 bays and comes with a floppy drive and DVD. The price is under \$2,200.

Business Graphic Laptop - This is a 1.4 GHz, Dell Latitude D800 with 1 GB DDR-SDRAM that is marketed for its graphics capability. The unit weighs 7 lbs and is 1.5 inches thick. It has 1 bay and comes with a DVD. There is no floppy in this unit. It is priced under \$2,400.

Rugged Laptop – This unit is marketed for applications where a laptop will get rougher than normal handling, like out in the field. This is a 1.40 GHz, Panasonic Toughbook 73 with 512 MB SDRAM. It has a floppy drive and a DVD/CDRW. It is priced around \$4,300.

1.6 Standard Core Software Configurations

ODOT has entered into Enterprise Agreement with Microsoft for licensing of the core PC products (operating system, Office Suite, and Back-Office client license). This agreement provides for upgrades of any of the products during the three-year contract at no additional cost. The cost for this three-year renewable agreement is based on a fee of \$211.65 per PC per year and was entered into in October 2001. This payment is made annually based upon the PC count in October 2001. Each year all additional PCs added during the course of the year above the initial desktop commitment will be identified and will be placed on a “true up purchase order”. “True up” fees cover both licenses and upgrades for the remainder of the three-year enrollment term.

1.7 Warranties and Installation Costs

All Dell configurations come with a 3-yr on-site warranty. Extended warranties for full on-site coverage, increased level of service, and loaner equipment are available for all configurations through Cascade Computer Maintenance. The standard Dell warranty includes coverage for the PC or Laptop; however, peripherals including monitors, keyboards and mice do not qualify for on-site service. Dell warranty is Next Business Day Response. If following agreement procedures, a service technician will, in most cases, be dispatched to arrive at your location for On-Site Service on the next business day; Monday through Friday 8:00 AM to 6:00 PM, excluding regularly observed holidays. If the service technician is dispatched for On-Site Service after 5:00 PM local time, the service technician may take an additional business day to arrive at your location.

Typically, DMV elects to purchase maintenance service packs for their field machines. The standard warranty is sufficient for headquarters machines. For Motor Carrier and other units in ODOT, the choice must be weighed on a case by case basis. The team recommends purchasing a maintenance contract for any laptops because of the higher problem rate for laptops. For desktops, it depends on the function of the individual machine. If the business cannot afford to have the unit down for any length of time, then a maintenance contract with the appropriate level of support should be selected. For most standard business uses, the standard warranty with support by an FSU technician is sufficient.

Installation will be handled through the Field Services Unit by either ODOT staff or contracted resources. Preparation and Installation costs are estimated to be \$120 per unit. If Field Services can do the work as time permits, then there is no charge to the user. If contractors must be brought in to handle specific scheduling needs, then this charge may be applied.

2. Organizational Change Strategy

2.1 Roles & Responsibilities

These individuals will be acting in the roles described in the PC Acquisition and Replacement Procedure for the 03-05 biennium.

System Owner – Technology Management Manager – Peter Byrne

Program Manager – Claudia Light

Program Coordinator – Lance Bissell

IT Purchasing and Asset Management Manager – Dennis Stephens

PC Replacment Coordinators –

DMV – Will Broadbent

Motor Carrier – Linda Bell-Uribe

Transportation and Central Services – Bob Yates

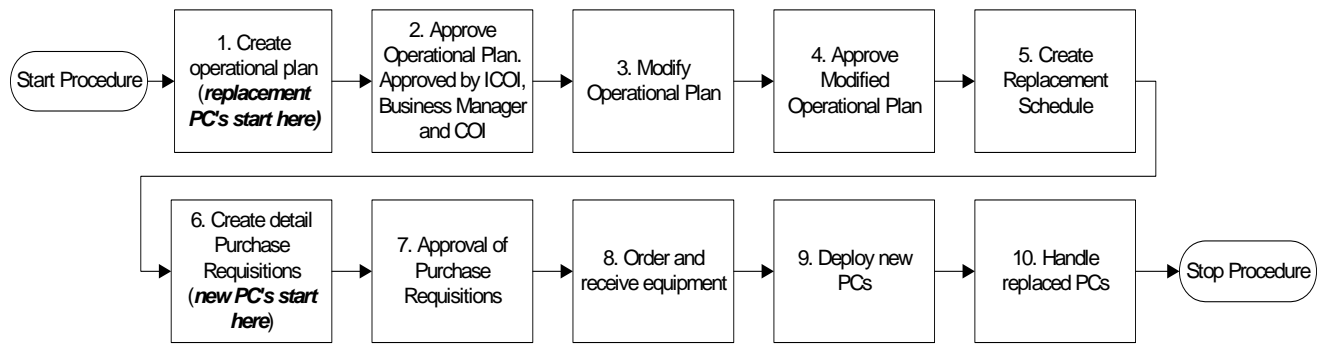
2.2 DAS Reporting Requirements

Current DAS policy requires reporting of IT purchases. To satisfy this requirement and simplify the reporting process, ODOT will submit a summary of our Operational Plan to DAS for approval as a good faith estimate of the number of devices of various configurations to be purchased throughout 03-05. Each month, ODOT will send DAS an accounting of purchases made against that Operational Plan.

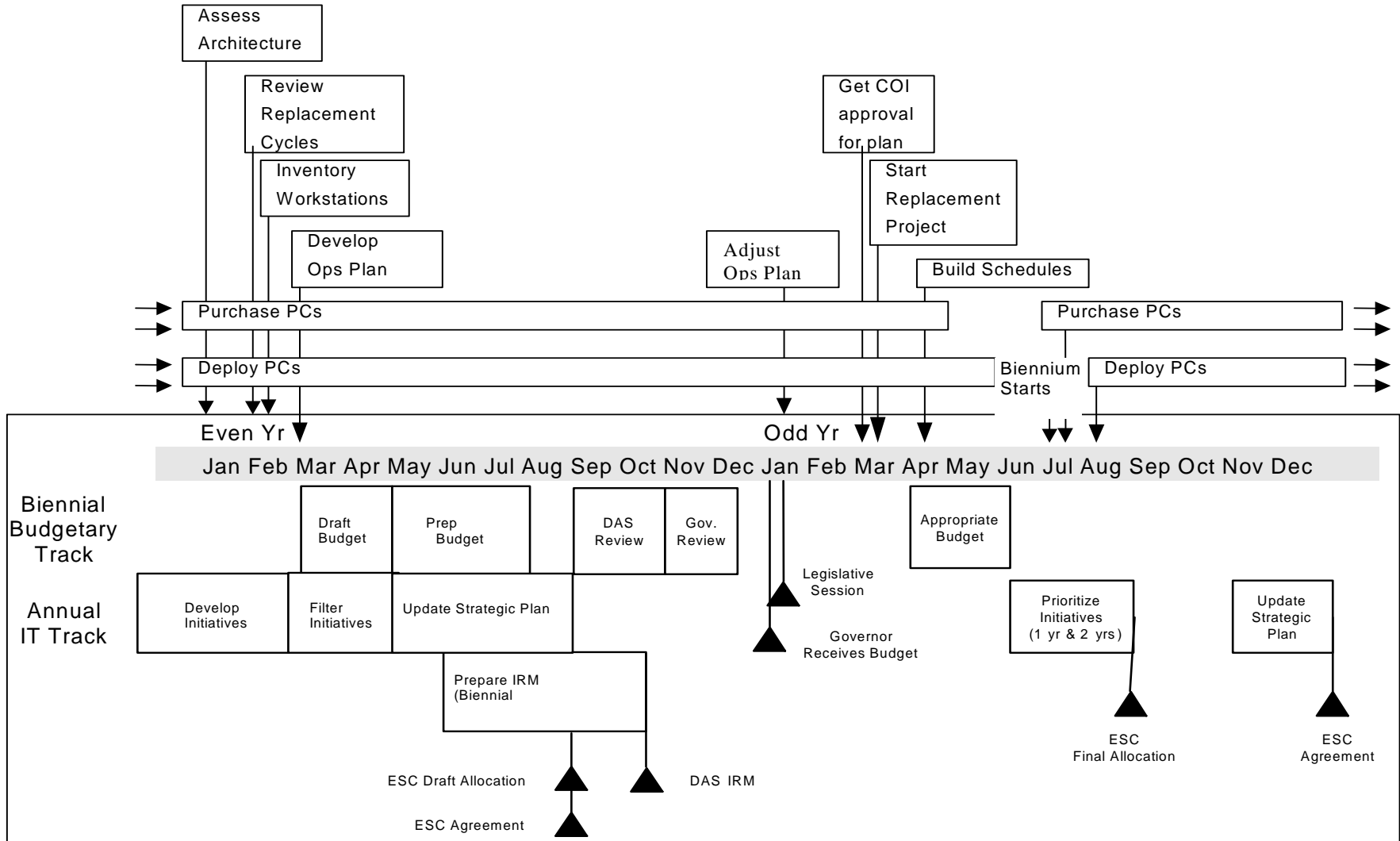
2.3 High Level Schedule

		Biennium Starts																							
Task	Resource	2003												2004											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Assess Architecture	PCLCM Team						X	X							X										
Review the Replacement Cycles	COIs								X						X										
Verify the PC Lifecycle Mgmt Tool	ITAM							X	X						X										
Prepare the Bienial Strategy	PM							X	X							X									
Develop the Operations Plan	PM															X									
Prepare the Budget	Business															X	X	X	X	X					
Prepare IRM Plan	IS/Business														X	X	X	X	X	X	X				
Update Strategic Plan	IS/Business										X	X	X	X											
Review & Adjust Operations Plan	PM						X	X	X																
Approve Operations Plan	COIs								X	X															
Create Detailed Schedule	PM									X	X	X	X												
Purchase PCs	ITAM	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Deploy PCs	FSU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		

2.4 High-Level PC Acquisition and Replacement Procedure



2.5 PC Replacement Cycle vs. IT Planning Cycle



APPENDIX A. Available Configurations for 03-05

Use/Type	Configuration	System Cost	Extended Warranty - PA #3100 Cascade Maintenance Services			
			8 hr Restore to Service			
			Service Pack (may be purchased anytime at full price)		Monthly	
			3yr	5yr	Within Warranty Period	After Warranty
Business Workstation -Small MiniTower (Std Footprint)	2.4GHz P4, 512MB DDR-SDRAM 333MHz (2 DIMMS), 800 FSB, Integrated DVMT video, 40GB 7200rpm hard drive, Windows XP Pro, Dell PS/2 keyboard, Dell USB 2-button Optical Mouse w/Scroll, integrated sound, internal speaker, integrated Intel 1GB Ethernet Card, <u>16X DVD</u> , and 3-year on-site warranty. (No floppy drive.)	\$ 834.90	\$ 150.00	\$ 210.00	\$5.00	\$12.40
Business Workstation -Small Form Factor (Small Footprint)	2.4GHz P4, 512MB DDR-SDRAM 333MHz (2 DIMMS), 800 FSB, Integrated DVMT video, 40GB 7200rpm hard drive, Windows XP Pro, Dell PS/2 keyboard, <u>floppy drive</u> , Dell USB 2-button Optical Mouse w/Scroll, integrated sound, internal speaker, integrated Intel 1GB Ethernet Card, <u>48X CD-ROM</u> , <u>stand</u> and 3-year on-site warranty.	\$ 834.00	\$ 150.00	\$ 210.00	\$5.00	\$12.40
Technical Workstation -Small MiniTower	<u>3.2GHz P4</u> , <u>1GB DDR-SDRAM</u> 400MHz (2 DIMMS), 800FSB, <u>64MB nVidia GeForce 4MX video</u> , <u>DVI w/VGA adapter</u> , 40GB 7200rpm hard drive, Windows XP Pro, Dell PS/2 keyboard, Dell USB 2-button Optical Mouse w/Scroll, integrated sound, internal speaker, integrated Intel 1GB Ethernet Card, <u>48X CD & DVD-CDRW Combo w/Roxio Easy CD Creator</u> , and 3-year on-site warranty. (No floppy drive.)	\$ 1,452.88	\$ 150.00	\$ 210.00	\$ 5.00	\$ 12.40

Options for Desktops:

Floppy Drive for Minitower	\$ 16.00
Floppy Drive for Small Form Factor	\$ 25.00

Laptop: Dell Latitude D600						
Business Lightweight 2 bays	1.60GHz w/14.1" SXGA+ Display, 512MB DDR-SDRAM (1 DIMM), ATI mobility Radeon 9000 4X AGP video, 40GB hard drive, <u>floppy drive</u> , Windows XP Pro, Dell Logitech USB Optical Mouse, integrated 56K V.92 modem, integrated 10/100 Ethernet, 8X DVD, D/Port port replicator, stand, 6-cell L-I battery, and 3-year on-site warranty.	\$ 2,135.84	\$ 200.00	\$ 275.00	\$ 5.00	\$ 15.05

Laptop: Dell Latitude D800						
Business Graphics 1 bay	1.40GHz w/15" WXGA Display, 1GB DDR-SDRAM (2 DIMM), <u>nVidia GeForce4 4200 Go 4X AGP w/32MB video</u> , 40GB hard drive, Windows XP Pro, Logitech USB Optical Mouse, integrated 56K V.92 modem, integrated 10/100 Ethernet, 8X DVD, D/Port port replicator, <u>9-cell</u> L-I battery, stand, and 3-year on-site warranty. (<u>No floppy drive.</u>)	\$ 2,374.20	\$ 200.00	\$ 275.00	\$ 5.00	\$ 15.05

Options for D600 and D800 Latitude:

Floppy Drive	\$ 42.00
Deluxe Nylon Carrying Case	\$ 53.10
64MB USB Flash Storage Device	\$ 44.10
D/Dock Docking Station	\$ 314.10
Universal Auto/Air Power Adapter	\$ 58.46
D/TravelLite Travel Module	\$ 8.10

D600 Only:

Classic Nylon Carrying Case	\$ 44.10
6-cell Spare Battery	\$ 71.10

D800 Only:

9-cell Spare Battery	\$ 71.10
nVidia GeForce4 4200 Go 4XAGP w/64MB Video Card	\$ 71.10

Rugged Laptop: Panasonic Toughbook 73

Business Rugged Laptop	1.4GHz, w/13.3" XGA Display, 512MB SDRAM, 40GB hard drive, Windows XP, optical mouse, integrated 56K modem, integrated 10/100 Ethernet, combo DVD/CDRW, port replicator, external floppy drive, 3.5-hour battery, and a 3-year limited warranty.	\$ 4,299.00	not avail	not avail	\$ 15.05	\$15.05
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Options for Panasonic Toughbook 73:

60GB Hard Drive	\$ 374.45
512MB SDRAM Module	\$ 310.00
Nylon Heavy Duty Carrying Case	\$ 86.00

CRT Monitors

17"	CRT Monitor M782	\$ 179.10	n/z	n/a	\$ 2.00	\$ 4.30
19"	CRT Monitor M992	\$ 224.10	n/z	n/a	\$ 2.00	\$ 4.30
21"	CRT Monitor P1130	\$ 594.00	n/z	n/a	\$ 4.00	\$10.25

INSTALLATION

PC or Laptop preparation and installation	\$ 120.00	n/a	n/a	n/a	n/a
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APPENDIX B. DAS IRR Plan Summary

ODOT PC Lifecycle Replacement Plan for 2003-2005 Biennium

Budget Forecasting, Estimates by Division

Division	Desktop				Laptop					Thin Client		Grand Totals		
	Business Workstation		Technical Workstation		Business Lightweight		Business Graphics		Rugged		Qty	Cost	Qty	Cost
	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost				
DMV	855	\$ 713,070.00		\$ -	21	\$ 44,852.64		\$ -		\$ -		\$ -	876	\$ 757,922.64
Motor Carrier	119	\$ 99,353.10		\$ -	29	\$ 61,939.36		\$ -		\$ -		\$ -	148	\$ 161,292.46
Central Services	224	\$ 187,017.60	40	\$ 58,115.20	46	\$ 98,248.64	9	\$ 21,367.80		\$ -		\$ -	319	\$ 364,749.24
Highway	633	\$ 528,491.70	236	\$ 342,879.68	363	\$ 775,309.92	111	\$ 263,536.20	20	\$ 85,980.00		\$ -	1363	\$ 1,996,197.50
All Other	94	\$ 78,480.60	17	\$ 24,698.96	27	\$ 57,667.68	2	\$ 4,748.40		\$ -		\$ -	140	\$ 165,595.64
	1,925	\$1,606,413.00	293	\$ 425,693.84	486	\$1,038,018.24	122	\$ 289,652.40	20	\$ 85,980.00	0	\$ -	2,846	\$ 3,445,757.48
Est. Unit Price		\$ 834.90		\$ 1,452.88		\$ 2,135.84		\$ 2,374.20		\$ 4,299.00		\$ -		
	DMV:	\$ 834.00												
Assumptions:														
1. Data on this sheet will be used solely for DAS IRR approval, which is for PC information only.														
2. Includes all planned replacement acquisitions following PC Replacement procedure.														
3. Exception requests will follow separate process published by OIT.														
4. Excludes costs and quantities of monitors, and extended or upgraded warranties thru CCM.														
5. Original Replacement Plan and revisions will be processed for DAS approval by OIT.														
6. Actual pricing and configuration may vary at time of Requisition.														
7. Configurations located in second tab of this workbook.														