

## Equipment:

## Hardware

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### PC Thorn lease/buy alternative:

Thorn in Norway has long experience in renting/leasing equipment to other companies.

<http://no.taw.thorn.no/store/about.asp?country=BN>

### PC:

Amitech MultiMedia 64bit Power-PC 1844

This computer has a 3400+ AMD Athlon 64bit processor, 1 GB RAM, ATI Radeon 9800 128MB graphics card, 250 GB harddrive, DVD burner, Antivirus and Windows XP.

<http://norge.thorn.no/store/product.asp?country=NO&catalog%5Fname=Thorn+Catalog&product%5Fid=NO%5FPC1844>



NOK 459/mnd (48 months)

### Monitor:

Amitech 19" CRT Silver Monitor

<http://norge.thorn.no/store/product.asp?country=NO&catalog%5Fname=Thorn+Catalog&product%5Fid=NO%5F19CRTS>



NOK 65/mnd (48 months)

	AUD	NOK
Lease pr. system pr. Month:	\$ 104	524,-
Total lease systems (20) pr. Month:	\$ 2096	10480,-
<b>4 years lease 20 systems (48months):</b>	<b>\$ 100 608</b>	<b>503 040,-</b>
<b>Buying all 20 systems (no lease):</b>	<b>\$ 67 712</b>	<b>338 560,-</b>

## PC DELL lease/buy alternative

Dell recommends these workstations for use with 3D studio MAX. I've configured a workstation to suit the requirements of the production of a 3d movie. These computers have a slightly better graphics card compared to the Thorn alternative. Antivirus protections are included in these workstations.

<http://www1.ap.dell.com/content/topics/global.aspx/solutions/en/wsadvisor70?c=au&l=en&s=bsd&~page=20&~tab=1>

Beskrivelse	Antall	Sum ekskl. MVA	Sum inkl. MVA
Precision WorkStation 360	20	218 380 kr	270 791 kr

<b>Standard Komponenter:</b>	Intel® Pentium® 4 processor Inneholder Microsoft® Windows® XP
<b>Operativsystem:</b>	Maksimalt 4GB dual channel DDR 400 minne Microsoft® Windows® XP Professional (SP1), Norsk
<b>Dokumentasjon og Recovery CD til utvalgte operativ system:</b>	System Drivers & Resource Recovery Kit
<b>Filsystem:</b>	NTFS
<b>Gold Technical Support:</b>	3 Years Gold Technical Support
<b>Kabinett:</b>	MiniTower - 3,5" floppy drive, 2 eksterne 5,25" bays & 2 interne bays (426,7mm x 177mm x 449,5mm)
<b>Processor:</b>	Intel® Pentium® 4 Processor (2.8GHz, 1MB cache, 800MHz FSB)
<b>Hyper Threading:</b>	Inngår ikke
<b>Energy Star:</b>	Energy Star® ikke aktivert
<b>Diskettstasjon:</b>	Inngår ikke
<b>Systemadministrasjon:</b>	Inngår ikke
<b>Interminne:</b>	256MB PC333 Dual Channel DDR Non-ECC (2 x 128MB)
<b>Harddisk nr. 1:</b>	80GB (7200rpm) EIDE ATA-100 Harddisk (+ NOK 20 kr)
<b>Harddisk nr.2:</b>	Inngår ikke
<b>SCSI kontroller:</b>	Inngår ikke
<b>Seriell ATA-kabel:</b>	Inngår ikke
<b>Grafikkort:</b>	nVidia QuadroFX 500 (128MB) Dual-Monitor VGA - VGA/DVI
<b>Farge:</b>	Midnattsgrå - monitor, tastatur og mus (TCO-95)
<b>Skjerm nr. 1:</b>	Dell 19" CRT (17,9 VIS) Mainstream (M992) (+ NOK 320 kr)
<b>Skjerm nr.2:</b>	Inngår ikke
<b>CD-Rom, DVD og CD-RW drive:</b>	CD-RW 48x
<b>Intern Zip-drive:</b>	Inngår ikke
<b>Høytalare:</b>	Interne høytalare
<b>Ekstra Lydkort:</b>	Integrert AC'97 Sound 16-bit, full Duplex Audio
<b>1394 Firewire Kontroller:</b>	Inngår ikke
<b>Nettverkskort:</b>	Integrert Intel® Gigabit nettverkskort med Remote Wake Up & ASF
<b>Modem:</b>	Inngår ikke
<b>Tastatur:</b>	Dell QuietKey Tastatur
<b>Mus:</b>	Dell/Logitech PS/2-mus med to knapper og ljul
<b>Pekeverktøy til 3D-redigering:</b>	Inngår ikke
<b>Antivirus:</b>	Norton Anti-virus 9.0 Corp Edition - Engelsk (+ NOK 250 kr)
<b>Security:</b>	Inngår ikke
<b>Service:</b>	3 Years Next Business Day On-Site
<b>Installasjonstjenester for firmaer:</b>	Inngår ikke
<b>Installasjonstjenester for privatpersoner:</b>	Inngår ikke
<b>Systemidentifikasjon:</b>	Inngår ikke
<b>Stoptrack &amp; Inventariemærkning:</b>	Inngår ikke

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-Spec sheet for the workstation

	Pris ekskl. MVA	MVA	Pris inkl. MVA
System	218 380 kr	24%	270 791 kr
Levering*	13 500 kr	24%	16 740 kr
Sum	231 880 kr		287 531 kr
			Sum inkl. MVA
			Sum ekskl. MVA
Beløp til betaling 231 880 kr 287 531 kr			

\*  
Bemerk at fraktprisen kun dekker transport i fastlands Norge - ikke Svalbard.  
Miljøgebyr er inkludert i prisen.

### Dell IT-hyra

	Vilkår	Leiebeløp eks. Moms	MVA	Totalt
Månedskostnad	24 Måneder	11 153 kr	24%	13 830 kr
	36 Måneder	7 768 kr	24%	9 632 kr

Prices are for 20 workstations in Norwegian Crowns. It is possible to lease workstations over a period of 24 or 36 months.

	AUD	NOK
Price pr system:	\$ 2708	13 540,-
Delivery for 20 systems:	\$ 3348	16 740,-
<b>Total price systems (20):</b>	<b>\$ 57 506</b>	<b>287 531,-</b>
Monthly cost:		
Leasing 24 months:	\$ 2 766	13 830,-
Leasing 36 months:	\$ 1 926	9 632,-
<b>Total cost 24 months:</b>	<b>\$ 66 384</b>	<b>331 920,-</b>
<b>Total cost 36 months:</b>	<b>\$ 69 336</b>	<b>346 752,-</b>

## Conclusion

The Thorn lease alternative is an overall superior system compared to the DELL system. The only slight advantage the DELL system has over the Thorn system is the graphics card.

The graphics card of the Thorn PC is an ATI Radeon 9800 128 MB card. This card should be adequate though a better graphics card, like the ATI FireGL card, would be desirable.

<http://komplett.no/k/ki.asp?sku=302672&cks=PRL>

This card costs NOK 5 995,- pr unit (approx. \$ 1200 AUD) and would add an additional NOK 119 900,- (\$ 23 980 AUD) to the Thorn price.

The Dell system is a slightly cheaper system and is the Thorn alternative. Dell has much better leasing plans compared to Thorn. So the Thorn alternative would be better if you could pay up front. Which alternative I would choose depends on how much money I would have to spend and when I could spend the money.

### **Money up front**

The workflow and productivity of the animators would be a lot better with the Thorn PC's with a FireGL graphic card. However the price would be a staggering NOK 458 460,- or \$91 692 AUD. If I couldn't afford the FireGL cards the Thorn option would still be the best one even with the ATI Radeon card as the system is much better compared to the Dell system. Without the FireGL cards the Thorn option aren't that expensive either at NOK 338 560,- or \$67 712 AUD.

### **Lease**

If I were unable to get the money for the systems up front, I would choose the Dell 36 month lease plan. That would give me NOK 9 632,- or \$1 926 AUD in monthly expenses for the hardware systems. A total of NOK 346 752,- or \$69 336 AUD.