

Meeting Student Demand using Blackboard as a Portal

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Outline

- Delft University of Technology
- What are our student demands?
- What have accomplished?
- Do they use it?
- Experiences
- Future plans

ACROPOLIS PALAIS DES CONGRES
NICE, FRANCE
26-28 FEBRUARY 2007

Delft University of Technology



BbWorldEurope
Educate. Innovate. Everywhere.™



Delft University of Technology

- One campus in Delft
- 14000 students, mostly fulltime
- 5000 employees
- 10-15% international students



Blackboard at the DUT

- Using Blackboard since 1999
- Started with CourseInfo 4
- Since 2005 full Academic Suite
- 4000 active courses



The screenshot displays the Blackboard interface for TU Delft. At the top, there is a banner image of a person working on a laptop. Below the banner is a navigation bar with links: MyTUDelft, Courses, Community, Digital Study Guide, and Help. The Blackboard logo is visible in the top right corner. The main content area is divided into two sections. The left section, titled 'Login Here', contains a login form with fields for NetID and password, a 'Login' button, and links for 'Activate account' and 'Forgot your password?'. The right section, titled 'Nieuws van de TU', features a 'Nieuws / News' header and a list of news items, including 'Join their team for the space elevator competition?', 'Lunchdebat over nut en noodzaak van gedragscodes voor studenten', 'Volg het vak Technoogie in Duurzame Ontwikkeling (23 - 27 april 2007)', 'Weblogs op de TU Delft', 'TU Nieuws 23 februari 2007 / TU News of February, 20 2007', and 'Verkiezingen SR en FSR / Elections to the Student Council and Faculty Student Councils'.

Student demands

	BK	CT	TA	ET	TI	TW	IO	LR	MT	WB	TBM	LST	ST	TN	OE	TIL	TUD
Kwaliteit studiegids faculteit	6,5	6,9	7,3	7,1	6,7	7,1	6,7	6,2	6,4	6,7	6,5	7,5	7,0	6,9	7,4	7,0	6,7
Beschikbaarheid studiegids faculteit	6,5	7,0	7,5	7,3	6,8	6,9	6,5	6,8	7,0	6,9	6,3	6,9	6,3	6,9	7,6	6,0	6,7
Kwaliteit overzicht keuzevakken	6,0	6,4	5,7	6,6	6,1	6,4	5,8	6,2	5,7	6,0	5,7	6,4	5,9	6,3	6,0	5,9	6,1
Informatie op website faculteit	6,3	6,0	5,8	6,4	6,0	6,3	6,0	5,5	6,3	6,3	6,2	6,4	6,1	6,1	6,2	6,0	6,2
Kwaliteit informatie blackboard	6,6	6,8	6,8	7,2	6,8	6,8	6,4	7,0	7,1	7,0	7,1	6,7	7,0	6,9	6,9	6,8	6,8
Kwaliteit TU Delft communicatie door Delta	6,3	6,4	6,4	6,5	6,3	6,4	6,2	6,7	6,4	6,6	6,6	6,1	6,8	6,4	7,3	5,9	6,4
Kwaliteit communicatie door facultaire nieuwsbladen	6,4	6,1	6,6	6,3	6,2	6,0	5,7	6,4	5,8	6,0	6,3	5,9	6,5	6,4	5,8	5,8	6,2
Bekendheid mondelinge voorlichtingsbijeenkomsten	5,7	5,9	6,1	5,9	5,4	5,9	5,1	6,0	5,9	5,7	5,9	6,3	5,5	6,0	5,0	5,2	5,7
Communicatie wijzigingen onvoorziene omstandigheden	5,2	5,7	5,9	6,3	5,9	6,3	5,1	6,0	5,9	6,1	5,9	6,5	6,0	6,1	5,7	5,4	5,7
Informatievoorziening over het studieprogramma	6,0	5,3	6,4	6,6	6,2	6,2	5,9	6,6	6,3	6,4	6,3	7,0	6,3	6,3	7,0	6,1	6,2
Informatievoorziening	6,1	5,4	6,4	6,7	6,3	6,4	6,0	6,4	6,3	6,4	6,3	6,7	6,3	6,4	6,6	6,0	6,3
N (minimaal)	613	279	48	119	185	52	277	392	64	260	184	44	77	111	10	15	2866
N (maximaal)	879	428	62	168	267	77	529	560	98	453	249	99	114	187	13	17	4214

Student demands

- Use Blackboard as main **communication tool**.
- Provide links to **all the information** we need.

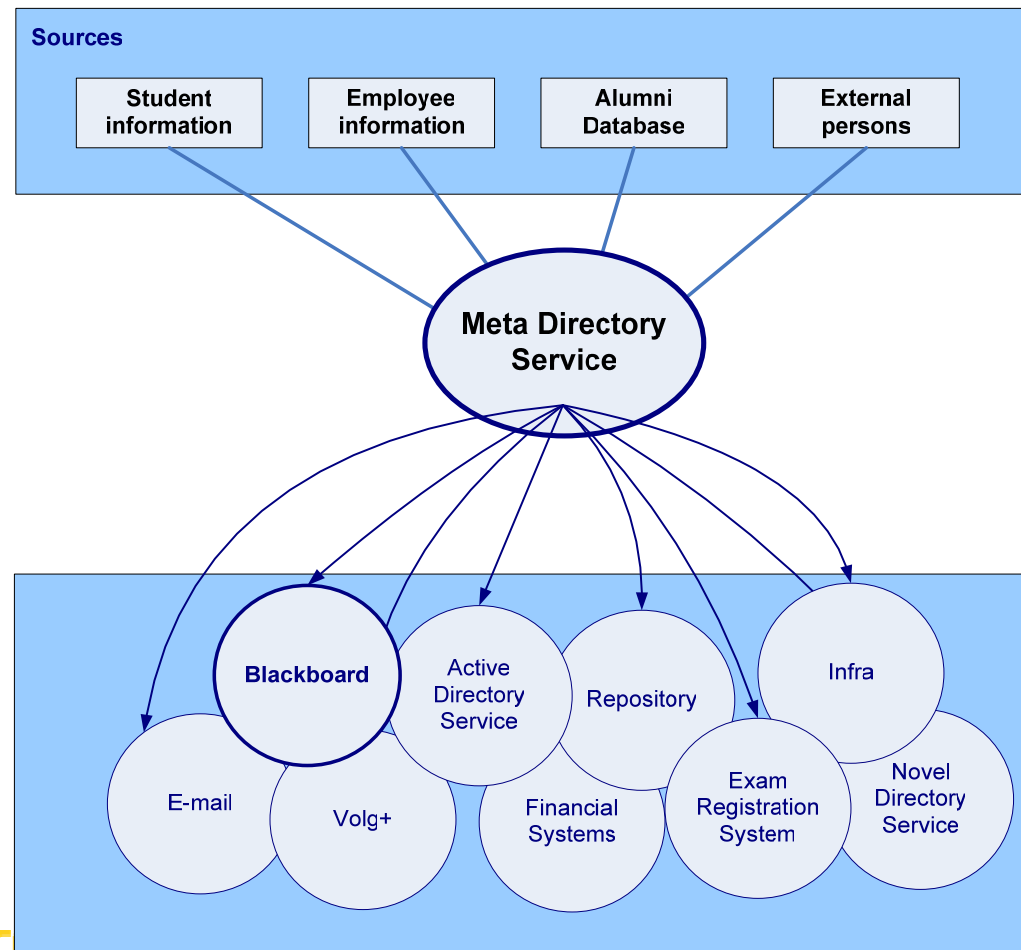
What have we accomplished?



Identity Management

- Every user has multiple roles.
- Is based on the Meta directory (LDAP)
- Using Snapshot

Identity Management



Portal Roles

- Each user has an primary role: student, faculty, alumni, toptech
- And multiple secondary roles: faculty X, cohort 2006, Ba/Ma
- Now 84 roles

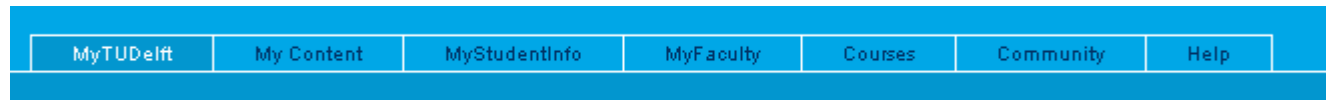
Role Label	Role ID	Description	Primary Count	Secondary Count	
Student	STUDENT		43,093	15	Modify
Faculty	FACULTY		15,365	20	Modify
Alumni	ALUMNI		9,166	2	Modify
TopTech	ROLE_9		556	0	Modify

Role Label	Role ID	Description	Primary Count	Secondary Count	
<input type="checkbox"/> Toegang tot TDS	tds	Deze persoon heeft toegang tot de TU Delft Distributieserver Software.	0	27,306	Modify
<input type="checkbox"/> Cohort - ouderejaars	student-ouderejaars		0	22,819	Modify
<input type="checkbox"/> Bachelor	ba		0	17,087	Modify
<input type="checkbox"/> Master	ma		0	11,640	Modify
<input type="checkbox"/> Cohort - 2005	student-2005		0	5,416	Modify
<input type="checkbox"/> Faculteit Bouwkunde	fac-bk		0	5,327	Modify
<input type="checkbox"/> Cohor 2006	student-2006		0	5,061	Modify
<input type="checkbox"/> BA - Bouwkunde	ba-bk		0	3,630	Modify
<input type="checkbox"/> MA - Architecture, Urbanism and Building Sciences	ma-ar		0	3,240	Modify
<input type="checkbox"/> Faculteit EWI	fac-ewi		0	3,108	Modify
<input type="checkbox"/> Faculteit CiTG	fac-citg		0	3,074	Modify
<input type="checkbox"/> Faculteit 3mE	fac-3me		0	3,020	Modify
<input type="checkbox"/> Faculteit LR	fac-lr		0	2,829	Modify
<input type="checkbox"/> Faculteit IO	fac-io		0	2,711	Modify
<input type="checkbox"/> Faculteit TNW	fac-tnw		0	2,436	Modify
<input type="checkbox"/> BA - Luchtvaart- en Ruimtevaarttechniek	ba-lr		0	2,308	Modify
<input type="checkbox"/> BA - Industrieel Ontwerpen	ba-io		0	2,213	Modify

Tabs

- Different tabs for different users:

- Students



- Staff



- Alumni



- Post-graduate students



Modules

- 120 modules
- 10 different types of modules of which 5 added by building blocks
- Some examples

RSS

- Include information from other websites into the Blackboard portal

Maintenance

[Maintenance Business Objects Feb.23rd](#)

Business Objects will not be available on Friday, February 23, between 00:00 and 13:00 hours (1:00 PM) due to maintenance.

[Maintenance wireless network feb. 21st](#)

On Wednesday 21 February (in extra service-window) between 17.30 hours maintenance are committed to the Wireless network of the Car means that there during the activities discontinuances of the wireless take place c

[Webmail EWI partially not available](#)

EWI Webmail is at this moment partially not available.

[more...](#)

Recent FAQ's

- [I get an error when I download a file with IE 7](#)
- [My password suddenly doesn't seem to work.](#)
- [Where can I find more information about the Advanced Group Tool?](#)
- [Why do I get the message "Challenge Token Null"?](#)
- [What are "Course Cartridges" and how do I use them?](#)

[more...](#)

- Building block:
RSS Console from vlegenius

HTML

- Static information

Roosters / Time Tables

Klik op de relevante link voor de studieroosters van jouw studie.
Click the link to the student time table of your study programme.

[EWI](#)[TNW](#)[CITG -TA](#)[L&R](#)[3mE](#)[BK](#)[IO](#)[TBM](#)

TDS

TUD Distribution server Software

Now it's possible to download the software of which there is a campus contract. New versions of the software will be made available on this system.

[Go to software](#)

Ideeenlijn O & S

Studenten en medewerkers kunnen vanaf heden hun suggesties van onze diensten melden via de site: www.ideenlijnOS.tudelft.nl. Ook klachten gemeld worden.

To improve the services of The Office of Education and Student Support, suggestions and comments at: www.ideenlijnOS.tudelft.nl are also free to report them here.

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Readers



- ♦ [Handleiding](#)

De dictaten kunnen afgehaald worden op een van de servicepunten, danwel via Nextprint naar het huisadres gestuurd worden.

Je kunt voor vragen [hier](#) terecht.



- ♦ [Manual](#)

An external printing office will send the readers directly to your home address or you can pick them up at one of the Servicepunten.

For questions you can contact [these persons](#).

Links

- Links to other university information



- Building block: MyWeblinks Plus

Links

1 Select Web Links

Choose the Web Links you would like to see by clicking on the boxes next to each of the Web Links.

Please select items you'd like to display (uncheck to not display). Those that have a red checkmark next to them are mandatory and must be displayed.

☒ Algemeen / General

☒ TU website

☒ TU Campus website

☒ Studentenzaken / Student Affairs

☒ Central Student Administration

☒ Studieadviseurs / Faculty Student Counsellors

☒ Studentdecanen / University Student Counsellor - voor (toekomstige) studenten en afgestudeerden

☒ Smart Study - methodieken om effectiever te studeren

☒ Studentenpastoraat / Student Chaplaincy

☒ Studentengezondheidszorg / Student Healthcare

☒ Studentenraad / Student Council

☒ Sportcentrum / Sport Facilities

☒ Onderwijs & Studentzaken

☐ Klachten / Complaints

☐ Meldpunt voor te laat nagekeken tentamens

☐ Ombudsman

☐ Diverse zaken / Miscellaneous

☐ OLI - Online Internet

☐ VSSD - studentenvakbond in Delft / Student Union in Delft

☐ Studium Generale

☐ Delta - Online versie van het universiteitsblad

☐ Shared Service Centre ICT


Custom building blocks (1)

- Course information

TU Delft course information

Year	2006/2007	▼
Organization	Elektrotechniek, Wiskunde en Informatica ▼	
Course code	<input type="text"/>	<input type="button" value="Go"/>
Instructor	<input type="text"/>	<input type="button" value="Go"/>
Text	<input type="text"/>	<input type="button" value="Go"/>

The asterisk (*) can be used as wildcard character in the search.

 **SIS**
Digital Study Guide
Study Information System

Custom building blocks (1)

Jaar: 2006/2007
Organisatie: -- all --

Zoek **Programma**

Vakcode: Zoek
Docent: Zoek
Tekst: Zoek

Met een sterretje (*) kunt u een wild card zoekterm plaatsen.

Vakcode	Vak titel	ECTS punten	p1	p2	p3	p4	p5
AE3-296TU (SPM9152)	Strategic Planning for Airport Systems Practical	3					
SPM1110	Inleiding technische bestuurskunde	4					
SPM1120	Analyse van bedrijfssystemen	4					
SPM1211	Bestuur en recht	6					
SPM1212	Economie en bedrijf	3					
SPM1220	Economics of infrastructures	9					
SPM1310	Wiskundige modellering en analyse	4					
SPM1330	Onderzoeksmethoden en dataverwerking 1	4					
SPM1340	DIP dynamica (EWI en ICT-domein)	3					
SPM1360	DIP statica (TIL en RGO-domein)	3					
SPM1410	Informatie- en communicatietechnologie 1	9					
SPM1510	Systemen in de industrie, de energie- en de watersector	9					
SPM1610	Transportsystemen 1	9					
SPM1710	Systemen op het terrein van ruimtegebruik en ruimtelijke ontwikkeling	9					
SPM1911	Miniprojecten TB	3					
SPM1912	Project analyse van bedrijfssystemen	4					
SPM2110	Analyse van complexe omgevingen	5					
SPM2120	Wetenschaps- en argumentatieleer	3					
SPM2210	Bestuur en bedrijf R	5					



















Custom building blocks (2)

- Exam Results

Volg+ Exam Results		
Last 5 exam results		
Course	Date Result	Result
SPM1999 D2	2007-02-02	7
SPM2310	2007-01-18	6
SPM1911	2007-01-02	6
SPM2941	2006-11-09	6
WI1325TB	2006-11-02	5
All results	ISP	

Custom building blocks (2)

Individual Study Program

Technische Bestuurskunde : Leerroute TB Bachelor opleiding			Date	Result
L  Prop-I-03: Propedeutisch Examen 2003 domein I				
L  P-03 domein I:				
	SPM1110: Inleiding technische bestuurskunde		03-11-2004	9
	SPM1120: Analyse van bedrijfssystemen		07-04-2005	6 +
	SPM1210: Bestuur en bedrijf A		19-01-2005	6
	SPM1310: Wiskundige modellering en analyse		23-08-2006	5 +
	SPM1330: Onderzoeksmethoden en dataverwerking 1		07-04-2006	8
	WI1318TB: Analyse 1		22-08-2005	9 +
	WI1319TB: Analyse 2		01-07-2005	2 +
	WI1321TB: Kansrekening en statistiek		29-08-2006	4 +
	SPM1910: DIP studio		03-12-2004	3
	SPM1910 D1: tentamen DIP studio		03-12-2004	3
	SPM1910 D2: toets mondeling presenteren DIP studio		19-11-2004	V
	SPM1911: Miniprojecten TB		02-01-2007	6 +
	SPM1912: Project analyse bedrijfssystemen		30-06-2005	7
	SPM1921: Project bestuur en bedrijf			
	SPM1340: DIP mechanica dynamica		06-04-2005	6
	SPM1410: Informatie en communicatietechnologie 1		22-06-2005	7

Custom building blocks (3)

- Exam registration
 - Overview of your personal exams

TAS : Exam / Practical registrations		
First 5 activities		
Course	Location	Date & Time
IN4150P	C.Drebbelweg - Practicumzaal DW_1-170	19-09-2006 13:45-17:45
IN3410	Expected by : 24-10-2006	30-10-2006 09:00-12:00
WI3210IN	Expected by : 25-10-2006	31-10-2006 09:00-12:00
ET3301	Expected by : 26-10-2006	01-11-2006 09:00-11:00
IN2770	Expected by : 27-10-2006	02-11-2006 09:00-12:00
Show All / Details TAS Campus Map		

Custom building blocks (3)

Overview of registered activities

Act.	Course	Event	Date & Time	Location	De-register till	Status
PR	IN4150P : Distributed Algorithms (Lab)	IN4150P [061]	19-09-2006 13:45-17:45	C.Drebbelweg - Practicumzaal DW_1-170	12-09-2006	NA
E	IN3410 : Distributed Systems	IN3410 [061]	30-10-2006 09:00-12:00	Expected by : 24-10-2006	23-10-2006	R
E	WI3210IN : Scientific Computing and Simulation I	WI3210IN [061]	31-10-2006 09:00-12:00	Expected by : 25-10-2006	24-10-2006	R
E	ET3301 : Embedded Systems	ET3301 [061]	01-11-2006 09:00-11:00	Expected by : 26-10-2006	25-10-2006	R !
E	IN2770 : Computer Graphics	IN2770 [061]	02-11-2006 09:00-12:00	Expected by : 27-10-2006	26-10-2006	R

Legend

Act.

E Exam
PR Practical

Comment

! For this activity OSA comments are available. Move mouse over for details.
* For this registration OSA comments are available. Move mouse over for details.

Status

R Registered Your registration for this activity is known, but not processed yet.
A Admitted The Faculty Student Administration has set your registration to 'Admitted'. You comply with the admission requirements.
P Placed The Faculty Student Administration has all admitted students given 'Room Assignment'. In the detailed information you can find in which room you are required to show up.
NA Not Admitted (Grayed Out) The Faculty Student Administration has set your registration to 'Not Admitted'. You don't comply to the admission requirements.
NP Not Placed (Grayed Out) The room assignment has been executed by the Faculty Student Administration. Because of room shortage not everybody can have a room assignment. Your admission did not result into a room assignment. This can be the case with Practical Work room assignment only.

The event registrations in this overview are issued to notify you of the registrations attained as registered in TU Delft's Exam / Practical Registration system (TAS). No claims may be made on the basis of this overview and any possible inaccuracies it may contain.

[Print Page](#) [TAS](#) [Campus Map](#)

Custom building blocks (4)

- Search alumni

Search alumni

Surname (without prefix)

Firstnames

Given name

City

Country

Studydiscipline

Year of graduation

Company

Job title

Keywords (for others to search on)

* can be used as wildcard character in the search

Search

Nederlands

English

Surname	Given name	City	Country	Study	Year of graduation	Show	Action
Valkenburg, van	Willem	DELFT	NEDERLAND	Technische Bestuurskunde	2003		edit
Valkenburg, van	Danker	Driebergen	NEDERLAND	Technische Natuurkunde	1976		edit
Valkenburg	Simon						edit

Announcements 2 RSS

- Personal RSS-feed with your announcement



Announcements 2 RSS

1 subscriber

[related feeds](#)

[unsubscribe](#)

[edit subscription](#)

My Blackboard News

My News

75 Items | [Sort Oldest First](#) | Updated: Tue, Feb 20 2007 11:18 AM

[\[ID3051 Project/Ontwerpen 5 \(2006-2007\)\] Start Ontwerpen 5](#)

Beste studenten, Welkom in Ontwerpen 5! De introductie van de oefening vindt plaats op woensdag 21 februari a.s. van 15:45 tot 17:45 in zaal T op IO. Aanwezigheid is verplicht. ;

Posted on: Tue, Feb 20 2007 9:45 AM | [Email This](#) | [Clip/Blog This](#)

Keep New: ☐

[\[Blackboard Support TU Delft\] Survey Posted](#)

The Survey jhbjhvj has been made available in Information.

Posted on: Thu, Feb 15 2007 12:03 PM | [Email This](#) | [Clip/Blog This](#)

Keep New: ☐

[\[Blackboard Support TU Delft\] Rooster week 8](#)

Posted on: Wed, Feb 14 2007 1:09 PM | [Email This](#) | [Clip/Blog This](#)

Keep New: ☐

[\[Course Managers and instructors of SIS-courses\] DCI niet beschikbaar](#)

Vanwege de verhuizing van een server werkt op dit moment de DCI plugin niet. Er wordt gewerkt aan een oplossing.

Posted on: Tue, Feb 13 2007 9:40 AM | [Email This](#) | [Clip/Blog This](#)

Keep New: ☐

[\[Course Managers and instructors of SIS-courses\] onderhoud](#)

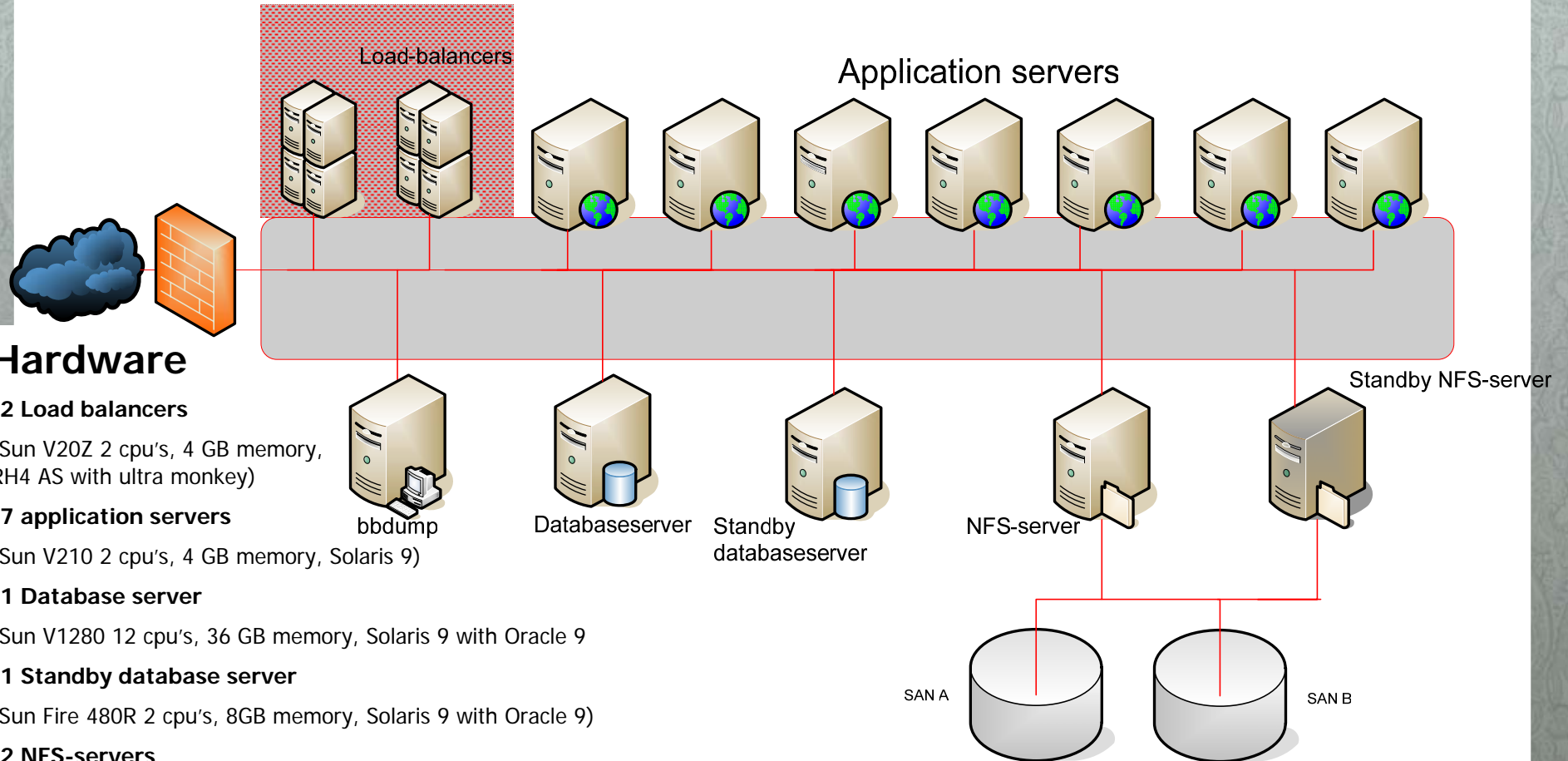
Wegens onderhoudswerkzaamheden is het DCI op dinsdag 13 februari ; ; vroeg in de ; ochtend ; tussen 7.00 en 8.00 uur een korte tijd onbereikbaar (Let op! er kunnen dus gegevens verloren gaan wanneer u op dit tijdstip werkt met de applicatie)

Posted on: Mon, Feb 12 2007 5:00 PM | [Email This](#) | [Clip/Blog This](#)

Keep New: ☐

Infrastructure

Blackboard.tudelft.nl



Hardware

•2 Load balancers

(Sun V20Z 2 cpu's, 4 GB memory, RH4 AS with ultra monkey)

•7 application servers

(Sun V210 2 cpu's, 4 GB memory, Solaris 9)

•1 Database server

(Sun V1280 12 cpu's, 36 GB memory, Solaris 9 with Oracle 9)

•1 Standby database server

(Sun Fire 480R 2 cpu's, 8GB memory, Solaris 9 with Oracle 9)

•2 NFS-servers

(Sun V210 2 cpu's, 4 GB memory, Solaris 9)

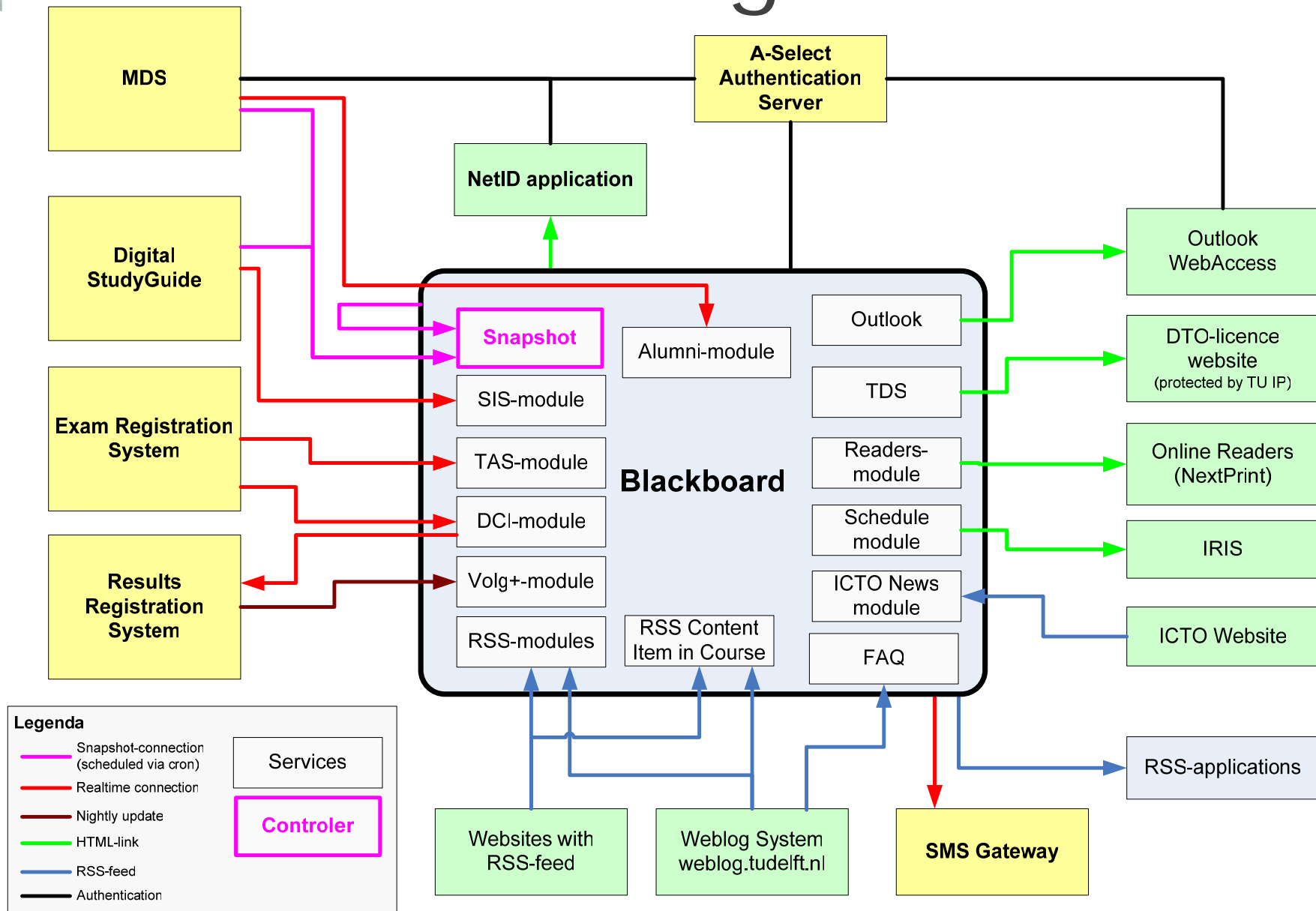
•1 BBdump (used for some scripts and backup of application servers)

(Sun V210 2 cpu's, 4 GB memory, Solaris 9)

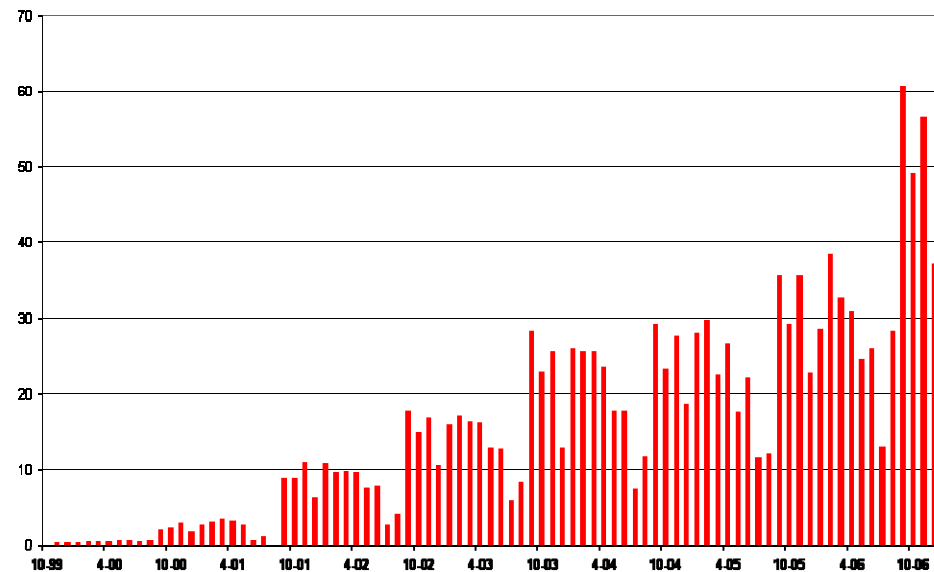
•2 Storage Area Network

(EqualLogic with lots of diskpace)

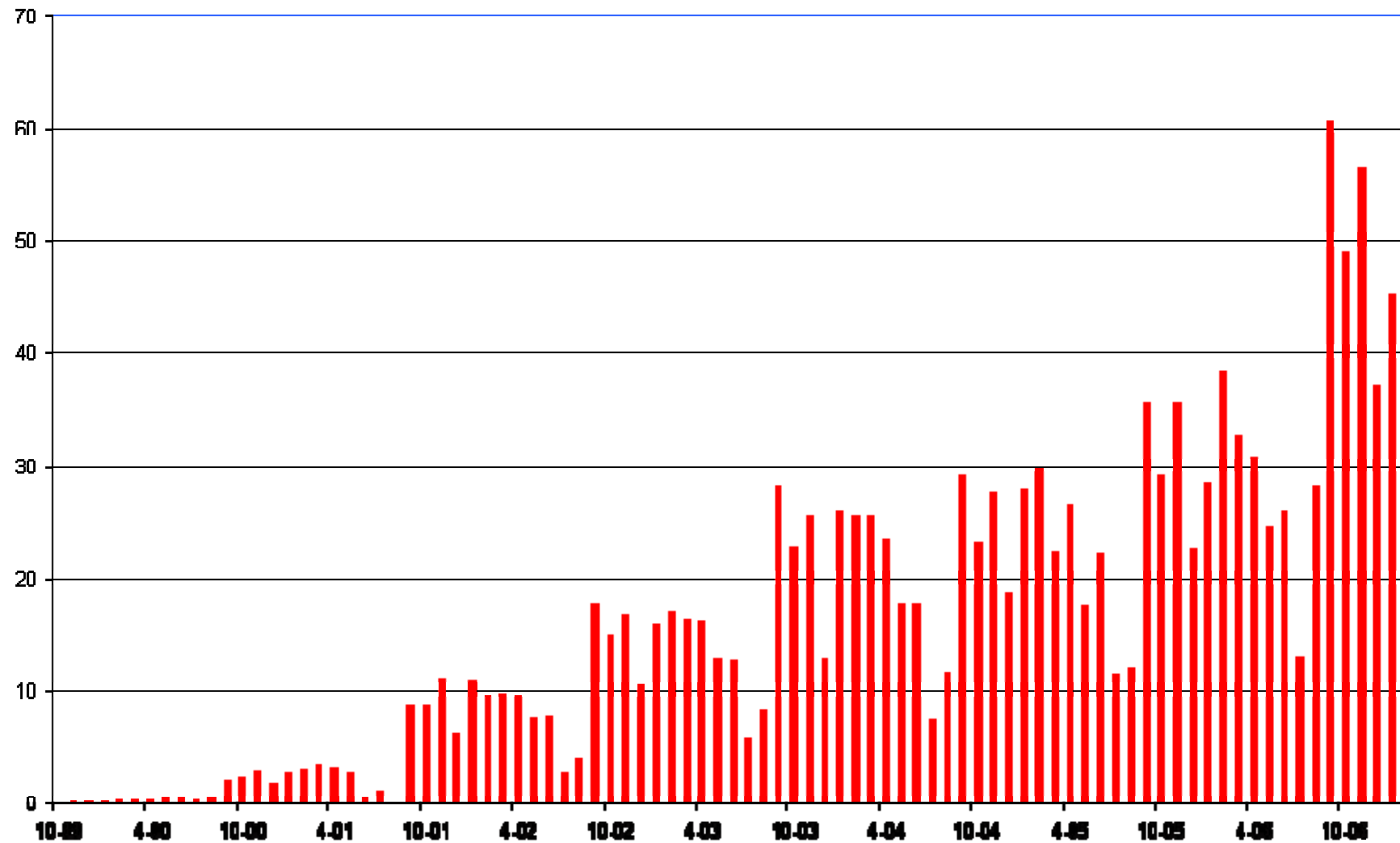
Blackboard integration



Do they use it?

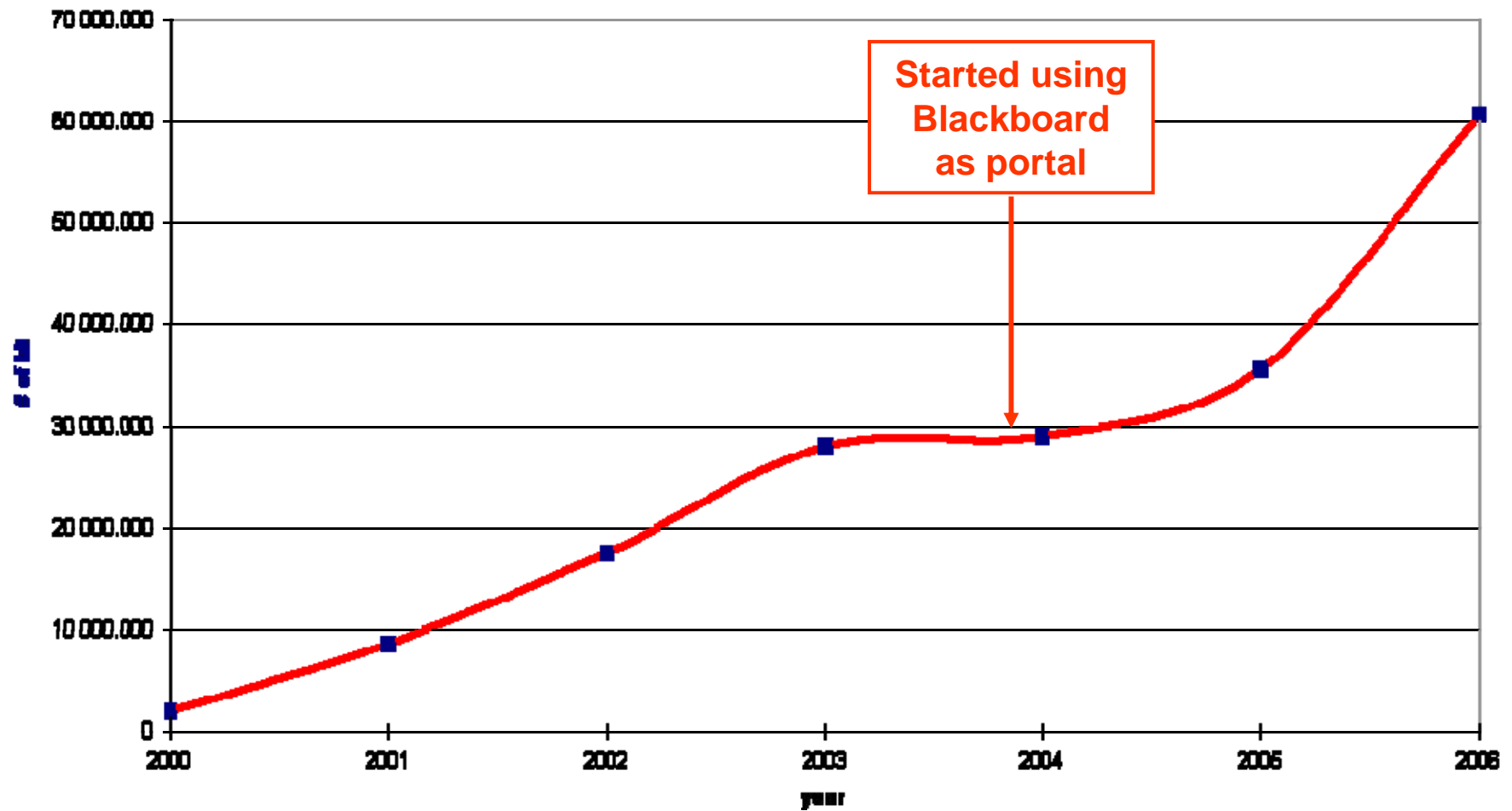


Overall use



Overall use

Number of hits in the month September



The records

max data traffic in a day	218 GB on 9 November 2006
max number of hits in a day	3.9 mln. on 4 September 2006
max number of hits in a month	60.6 mln. in September 2006
Highest daily number of hits	2.02 mln. in September 2006
Highest number of visits in a month	437,967 visits in November 2006
Highest number of page requests in a month	14.5 mln. in September 2006
Highest data traffic in a month	3.8 TB in November 2006

Use of Blackboard portal

- **My TU Delft tab:**
 - More than 45,000 hits per day
- **My Student Info tab:**
 - More than 10,000 hits per day
- **10,000 users per day logon**

Use of Building blocks

- **Exam Results:**
 - More than 1000 hits per day
- **Announcements2RSS:**
 - More than 4000 hits per day

Experiences

- It isn't possible to show a module based on multiple portal roles.
(if portal role = "student" AND "faculty A")
- Be careful with module administrators.
- Multi-language support doesn't work with the portal.
- Students don't customize their portal.

Future plans



Future plans

- Portal module with **language selection**.
- Personalised **class schedules**.
- Creation of a **instructor's portal**.

Questions



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