http://mouse2.hms.harvard.edu
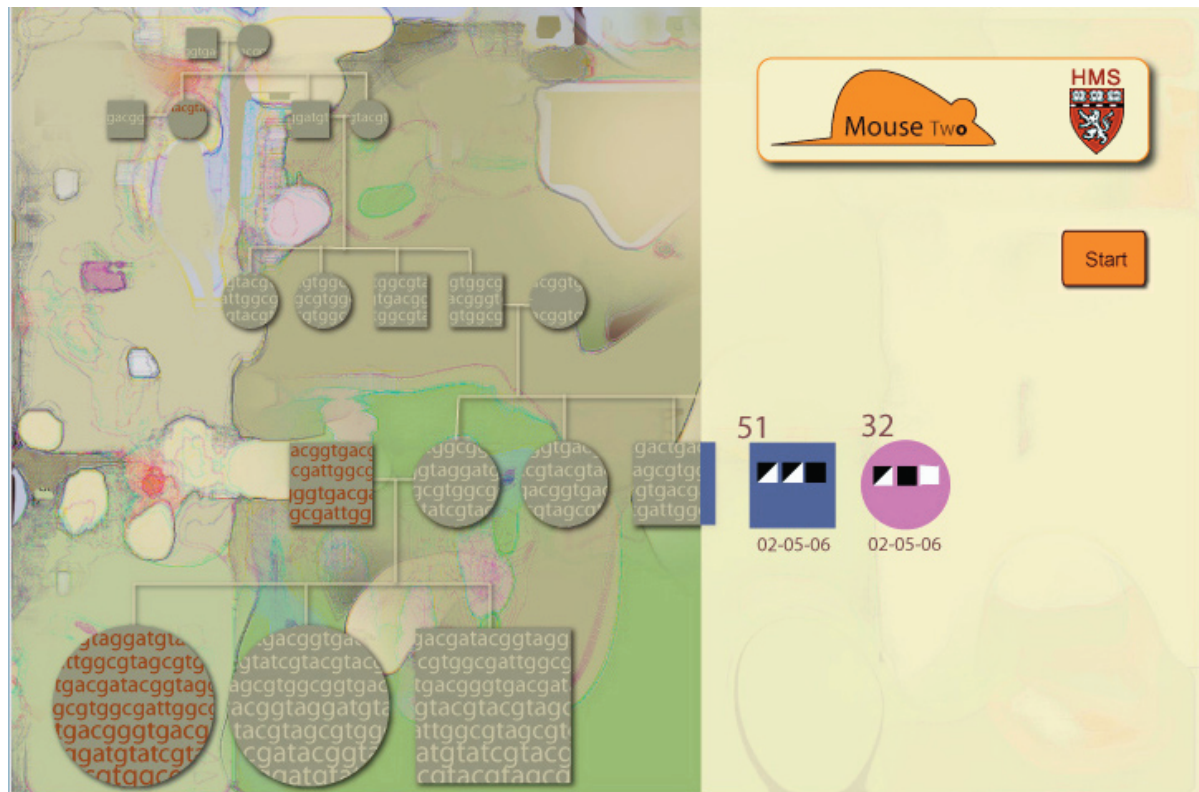
Database access

Access to the mouse database from any online computer

System Requirements :

Clients
- Windows 2000, XP, Vista, Mac OS 10.4.8 or later, Linux
- Java 5 or higher.

Server
- Windows or Linux
- Java 5
- Tomcat 5.5.x or Sun Java Application Server 9.01
- PostgreSQL 8.2.4 or later

Colony type

Ability to...

Local colonies :

Researchers have direct access to mouse lines within the network.

Browse / search lines

View detailed information

Create line reports

Edit/ Create Line

Line management

Transfer / Import / Export

Make Requests

General Database Admin.

Management Interface

Remotes colonies :

Researchers do not have direct access to mice and make requests to caretakers.
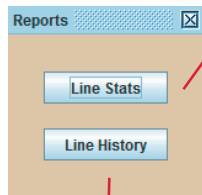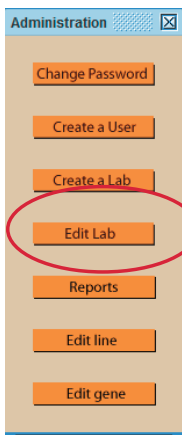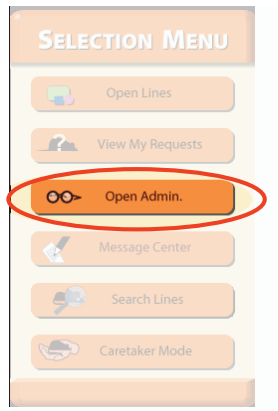(Jackson Lab)

View Lines

Line Maintenance

Handle Requests

Caretaker Interface

Create Line Reports

Monitor current status of colonies by facility or line.

SELECTION MENU

- Open Lines
- View My Requests
- Open Admin.
- Message Center
- Search Lines
- Caretaker Mode

Administration

- Change Password
- Create a User
- Create a Lab
- Edit Lab
- Reports
- Edit line
- Edit gene

Reports

- Line Stats
- Line History

Report by facility :

List of lines with current number of cages, mice, breedings.
(Can be saved or printed directly)

Line Stats Report

Facility: JAX   Report Date: Jul 31, 2010

Generate Report

Name	Breeing Mice	Reserved Mice	Available Mice	Total Mice	Breeding Cages	Total Cages
Abo-370044	4	2	8	14	2	7
Aire.B6-370159	6	24	114	144	3	15
Aire.NOD-370081	28	36	30	94	4	25
B10.BR li-s2TIM-370098	8	7	41	56	2	11
B6-substitute-370072	0	0	0	0	0	0
B6.g7-370050	35	21	157	213	12	46
BDC.RAG/B6-370375	2	0	40	42	5	12
BDC.RAG/Bg7-370352	6	0	20	26	3	12
BDC.RAG/NOD-370048	0	0	130	130	3	26
BDC/Bg7-370053	29	28	169	226	14	66
BDC/RAG/NOD.H2b-3703...	4	0	23	27	5	6
BDC2.5-NOD.Thy1-370094	12	59	50	121	7	13
BDC2.5/N-370042	26	46	138	210	10	77
BDC2.5/NOD.H2b-370373	2	0	13	15	2	5
Cao/B6-370069	4	0	21	25	2	8
Cao/N-370043	4	16	33	53	3	8
CD40/N-370046	4	13	11	28	2	7
CTLA4-370045	4	0	108	112	2	8
Ea16/B6-370037	12	0	84	96	4	20
Ea16/NOD-370082	77	17	240	334	5	58
Export for CITDH	0	0	0	0	0	7
F1-NOD.B6.H2b-370432	1	0	10	11	1	6
F1-Rag/NOD.B6 -370367	0	0	38	38	2	10
F1-Rag/NOD.B6g7-370431	0	0	21	21	1	5

Save   Print

Report by line :

List of mice with gender/ Date of birth, Genotype/ status.
(Can be saved or printed directly)

Line History

Line: test1   Start Date: Aug 16, 2010

Generate Report

Mouse	...	Aire	IL-7RaT...	GFP	Foxp3
08-27 13		-/-	^/Tg	Tg/Tg	
08-27 14		-/-	^/Tg	Tg/Tg	
08-27 15		-/-	^/Tg	Tg/Tg	
08-27 16		-/-	^/^	Tg/Tg	
08-27 17		-/-	^/^	Tg/Tg	
08-27 18		-/-	^/^	Tg/Tg	
08-27 19		-/-	^/^	Tg/Tg	
08-27 3		-/-	^/Tg	Tg/Tg	
08-27 4		-/-	^/^	Tg/Tg	
08-27 5		-/-	^/^	Tg/Tg	
08-27 6		-/-	^/Tg	Tg/Tg	
08-27 7		-/-	^/^	Tg/Tg	
08-27 8		-/-	^/^	Tg/Tg	
08-27 9		-/-	^/Tg	Tg/Tg	
03-01 20		-/-	^/^	^/?	^/^
03-01 21		-/-	^/^	^/?	^/Tg
03-01 22		-/-	^/^	^/?	^/Tg
03-01 23		-/-	^/^	^/?	^/Tg
03-01 24		-/-	^/^	^/?	^/Tg
03-01 25		-/-	^/^	^/?	^/Tg
03-01 26		-/-	^/^	^/?	^/Tg
03-01 27		-/-	^/^	^/?	^/Tg
03-01 28		-/-	^/^	^/?	^/Tg
03-01 29		-/-	^/^	^/?	^/Tg

Save   Print

Browse available lines

Browse all current visible lines in the network.

SELECTION MENU

- Open Lines
- View My Requests
- Open Admin.
- Message Center
- Search Lines
- Caretaker Mode

Select Lines

Name	Mut.ty...	Gene	Backgrou...	
Abo-370044	<mut. ty...	MHCIIA§¡	<backgrou...	Mor...
Abo/Ea16/B6-3...	<mut. ty...	MHCIIA§...	<backgrou...	Mor...
Aire Balb.c	<mut. ty...	AIRE-KO	<backgrou...	Mor...
AIRE-NODh2b	<mut. ty...	H-2g7, H...	<backgrou...	Mor...
Aire.B6-370159	<mut. ty...	AIRE-KO	<backgrou...	Mor...
Aire.NOD	<mut. ty...	AIRE-KO	<backgrou...	Mor...
Aire.NOD-3700...	<mut. ty...	AIRE-KO	<backgrou...	Mor...
Aireo/B6-129	<mut. ty...	AIRE-KO	<backgrou...	Mor...
B10.BR Ii-s2Tl...	<mut. ty...	TET-IiM...	<backgrou...	Mor...
B6.g7	<mut. ty...	H-2g7	<backgrou...	Mor...
B6.g7-370050	<mut. ty...	H-2g7	<backgrou...	Mor...
B6.LKO.3GFP	<mut. ty...	LKO.3GFP	<backgrou...	Mor...
B6.LKO.3Thy1.1	<mut. ty...	LKO.3T...	<backgrou...	Mor...
B6.NOD Ch1 Fo...	<mut. ty...	Chr1	<backgrou...	Mor...
B6.NOD1	<mut. ty...	C5, Chr1	<backgrou...	Mor...
B6.Nor-1.6CFP	<mut. ty...	Nor-1.6...	<backgrou...	Mor...
B6.Nor-1.7CFP	<mut. ty...	Nor-1.7...	<backgrou...	Mor...
B6.Nur77	<mut. ty...	Nur77, T...	<backgrou...	Mor...
B6.Nur77.7GFP	<mut. ty...	Nur77.7...	<backgrou...	Mor...
B6.Nur77.8GFP	<mut. ty...	Nur77.8...	<backgrou...	Mor...
B6.Nurr1	<mut. ty...	Nurr1	<backgrou...	Mor...
B6.Nurr1.6Thy1...	<mut. ty...	Nurr1.6...	<backgrou...	Mor...
B6g7.Nur77	<mut. ty...	TCRbdc...	<backgrou...	Mor...
BCAN-370047	<mut. ty...	TCRaPH...	<backgrou...	Mor...
BDC.RAG-3700...	<mut. ty...	RAG1¡, T...	<backgrou...	Mor...
BDC/Bg7	<mut. ty...	TCRbdc	<backgrou...	Mor...

My Lines
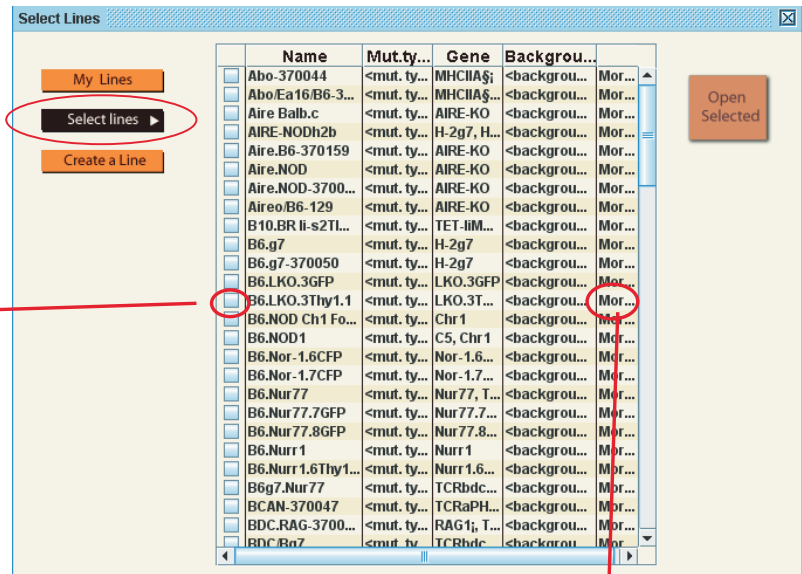Select lines ▶
Create a Line

Open Selected

"My lines" :
Lines to which the user has
at least management privileges

"Select lines"
List of all lines visible to the user

Check the line(s) to open

The number of lines to
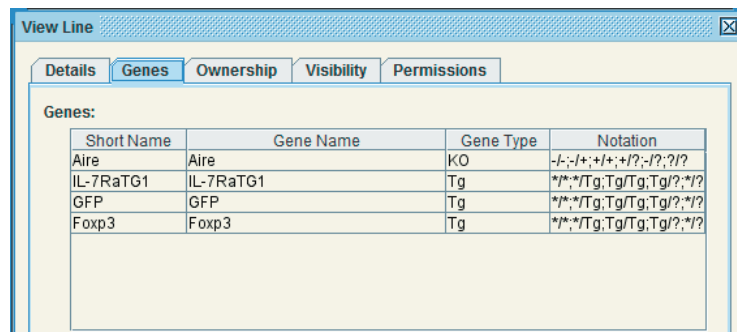open is not limited
but only 2 can be
viewed simultaneously

Opens a window with more
details about the line (not yet implemented)

Create a new mouse line

Each line created is defined by :

- **Lab ownership**
- **General information :** name, facility
- **Monitored Genes :** KO, conditional KO, KI, transgene, natural mutation, polymorphic variant.
- **Visibility :** eg public, owning labs only, specific users.
- **Permissions** : list of users, overseers, caretakers.

View Line

Details | Genes | Ownership | Visibility | Permissions

Genes:

Short Name	Gene Name	Gene Type	Notation
Aire	Aire	KO	-/-;-/+;+/+;+/?;-/?;?/?
IL-7RaTG1	IL-7RaTG1	Tg	*/*;*/Tg;Tg/Tg;Tg/?;*/?
GFP	GFP	Tg	*/*;*/Tg;Tg/Tg;Tg/?;*/?
Foxp3	Foxp3	Tg	*/*;*/Tg;Tg/Tg;Tg/?;*/?

View detailed information for a line

Availability

Line name

scroll down the menu
to choose from the preselected lines

View options:

Scroll down to choose from the 3 options:
- Cage
- mouse (default view)
- Breeding

Additional filtering option
for the display

The line details are
editable by authorized users

TEST1   Mouse view   ☑? | Filter | Group | Sort by | Highlight

TEST1   Edit

All / Breeding / Available ▸

432	436	441	445	449	453	457	461	465
01-26-07	01-26-07	11-30-06	12-27-06	12-27-06	12-26-06	12-26-06	12-26-06	02-03-
433	437	442	446	450	454	458	462	466
11-30-06	01-26-07	12-27-06	12-27-06	12-27-06	12-26-06	12-26-06	12-26-06	02-03-
434	438	443	447	451	455	459	463	467
01-26-07	11-30-06	12-27-06	12-27-06	12-27-06	12-26-06	12-26-06	12-26-06	02-03-
435	439	444	448	452	456	460	464	468
01-26-07	11-30-06	12-27-06	12-27-06	12-27-06	12-26-06	12-26-06	12-26-06	02-03-

Rag1

selected: 0   Clear

detailed content of the line:
population of mice, cages or breeding books
The content is set by the view options

**Description of the gene
monitored in that line**

**Choose to view all mice, breeding mice only
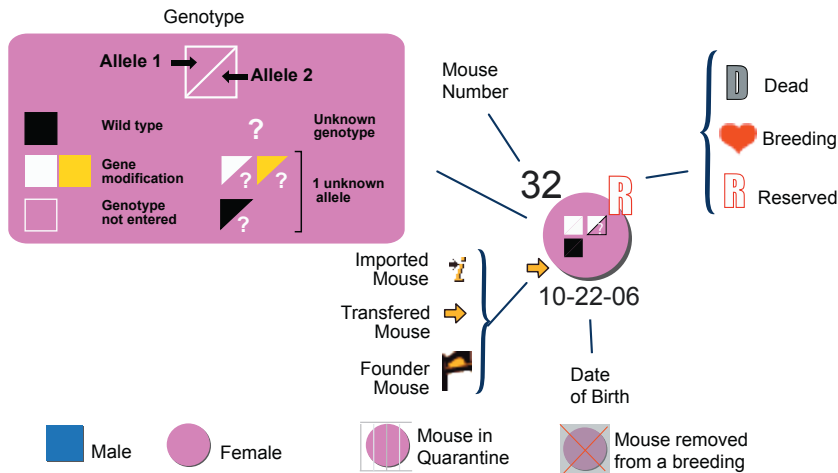or available mice** (not breeding)
set to available by default.

Genotype

Allele 1 → ☐ ← **Allele 2**

■ Wild type

☐ Gene modification

▢ Genotype not entered

? Unknown genotype

◩◪ ▨ 1 unknown allele

KO Knock Out	**w** Wild Type **–** Null mutation	W	w/–	–/–	w/?	–/?	?/?
cKO Conditional Knock Out	**w** Wild Type **–** Conditional Null mutation	W	w/–	–/–	w/?	–/?	?/?
Nat Natural Mutation	**w** Wild Type **m** mutation	W	W/m	m/m	w/?	m/?	?/?
KI Knock In	**w** Wild Type **KI** Knock In	W	W/Ki	Ki/Ki	w/?	Ki/?	?/?
Tg Transgene	**w** No transgene (WT chromosome) **Tg** Transgene	W	W/Tg	Tg/Tg	w/?	Tg/?	?/?
Pol Polymorphism	**w** Not present **P** Present (e.g. g7)	W	W/P	P/P	w/?	P/?	?/?

View detailed information for a line

Visual cues

Mouse view

Genotype

Allele 1 → ⬚ ← Allele 2

⬛ Wild type

❓ Unknown genotype

⬜ Gene modification

◩❓ ◪❓ 1 unknown allele

⬜ Genotype not entered

◤❓

Mouse Number

32 ℝ

10-22-06

Imported Mouse *i*

Transfered Mouse →

Founder Mouse ⚑

Date of Birth

⬜ Dead

❤ Breeding

ℝ Reserved

🟦 Male 🟣 Female 🟣 Mouse in Quarantine ⬜ Mouse removed from a breeding

Mouse details window
(Right click on a mouse).

Cage: (id=33)
Rack: (id=0)
Room: (id=1) Edit

Background:
Line: Test4
ID:
Founder: no
Date of Birth: 10-22-06
Date of Death:
Sex: female
Genotype: IL10 KO ◩ -/-
IL18 KO ◩ -/?
Ifgn Tg ◩ Tg/Tg
Sampled: yes
Mother:
Father:
Breeding:
Grant:
Protocol:

Cage view

Breeding ❤

Reserved ℝ

10-04-07

3
3   0

New Litter

Cage Creation Date

Number of Males Females

Cage Number
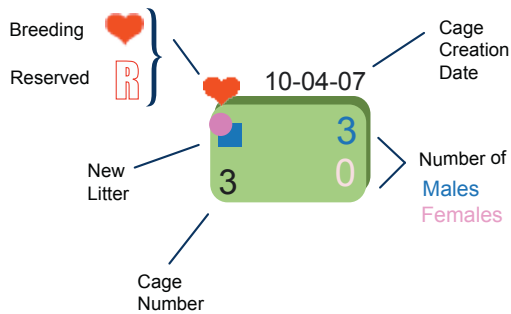
Cage details window
(Right click on a mouse).

10-04-07
3

10-04-07
3

3

Cage: (id=176) Edit
Start Date: 10-04-07
Room: (id=1)

27 🟦 28 🟦 29 🟦
04-26-07 04-26-07 04-26-07

Breeding view

Breeding Number

107

Breeders and corresponding Genotype

🔵 ◩◪
🟣 ◩⬛

last   Tot
06.26.
11   38
(3)

New Litter 🟣🟦

Date of birth
Pups
(# litters)

04-20-07

Breeding start

litters

today's date
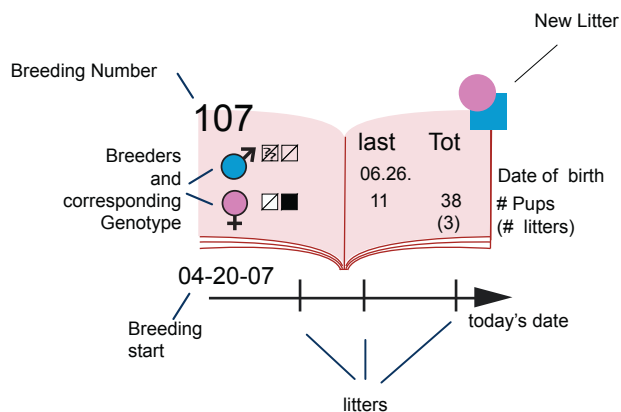
Breeding details window
(Right click on a mouse).

107 Last Tot 04-26
04-20-07

108
04-26-07

107 Last Tot 06.26.
11   38
(3)
04-20-07

Mate Stop breeding

Breeding Number: 107
Date Set: 04-20-07
Date Stopped:

18 ◩◪ 13 ◩⬛
03-30-07 03-30-07

Show/ organize the display of specific group of mice

Group/filter mice or cages based on their status, sex, age, genotype

Main Display Options display:

By default the display is set to "**Available"** cages only (excluding breeding)

Select one of the 3 options by clicking the corresponding buttons:
- **Available** (all cages except breeding)
- **Breeding** (breeding cages only)
- **All**

| Available | Breeding | All |
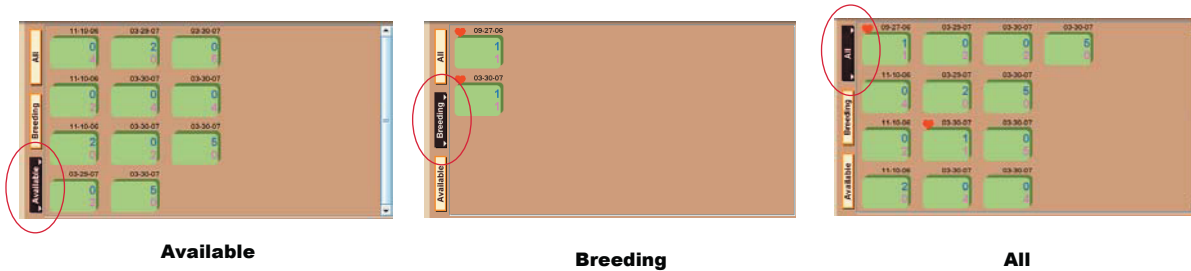
Additional sorting/ filtering options:

Filter (e.g. show females only)
Group (e.g. group by litter, genotype...)
Sort (e.g. sort mice by age)
Highlight (e.g. highlight females between 3 and 5 weeks).
(not implemented yet)

All filters/ sorting can can be combined with another filtering option(s).
(e.g. filter females, sort by age).

They can be removed anytime by clicking again on the button.

Example : Grouping by sex and genotype:

At present only the first gene is used for the grouping
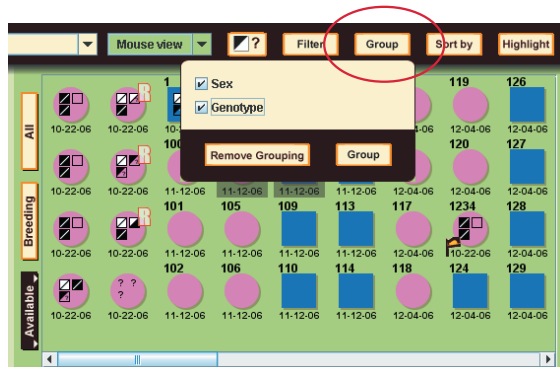
Once applied the option button changes color.

Actions / Requests to manage a line

Sacrifice — Update the database on an action taken. Can be a request.

Dead Mouse — Update the database on the status of a mouse

New Litter — Update the database on the status of a cage/breeding.

Combine Cage — Update the database on cage contents.

Split Cage — Update the database on cage contents.

Wean — Update the database on cage contents.

Notify — Post a note/ observation regarding a mouse/cage/ breeding that can be read by users, but does not need immediate action.
(not yet implemented)

Alert — Send an alert regarding a mouse/cage/ breeding that needs action.
(not yet implemented)

Mate — Set up a new breeding

Stop breeding — Update the status of mice / cage / breeding.

Reserve — Indicate your plan to use a cage/mouse in the near future (simply indicative, it remains accessible to other users)

Unreserve — Cancels a reservation made by the same user

Veto reservation — Deny a reservation made by another user if you have line overseer privileges for that line.

Sample — Indicate that a mouse has been sampled (tail, blood or other)
Note: *a mouse has to be sampled before it a genotype can be entered.*

Genotype — Enter the genotype of a sampled mouse

Give — Give mice/ cages to another user
(not yet implemented)

Transfer — Transfer a mouse/ cage from one line to another line in the Mouse 2 network database.

Export — Export a mouse outside of the facility mouse 2 network.
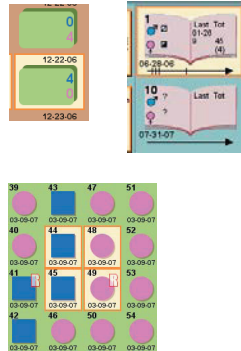(not yet implemented)

Import — Import a mouse in the database.

Manage a line / update information

① Select the mice. cage(s) or breeding to modify by clicking on the target(click to select, click again to de-select)
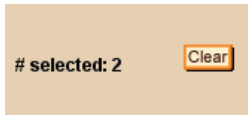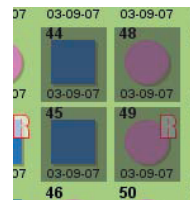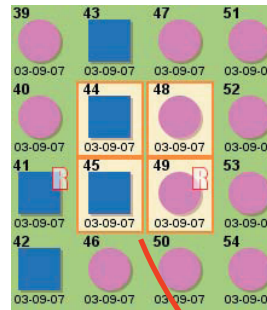
selected: 2   Clear

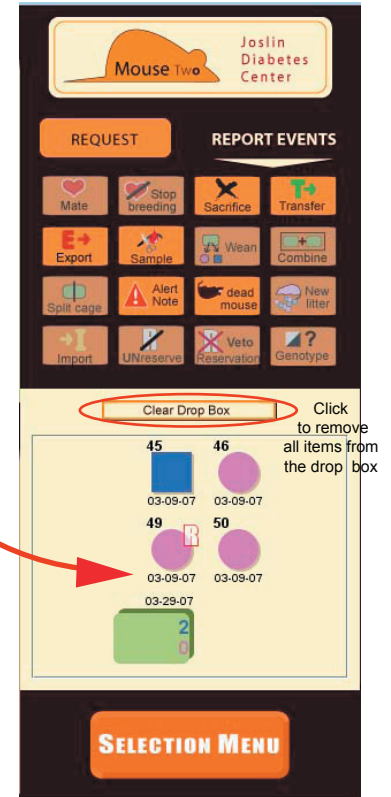The number of items selected appears on the left side of the line summary

Use the "**clear**" button to cancel all selections for that line

② Drag the selection in the drop box

Click to remove all items from the drop box

Clear Drop Box

Once in the "drop box",
The selected mice are no longer selectable in the main line window

Note: Only mice / cages / breedings from the same line can be added to the "drop box" simultaneously.

③ Choose an action to apply to the selected mice/ cages in the drop box.
(The available actions for the selection and user privileges show as orange buttons.)

REQUEST   REPORT EVENTS

Mate   Stop breeding   Sacrifice   Transfer
Export   Sample   Wean   Combine
Split cage   Alert Note   dead mouse   New litter
Import   UNreserve   Veto Reservation   Genotype

Clear Drop Box
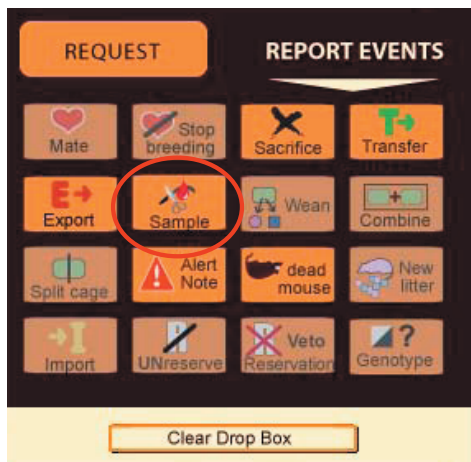
④ When clicking an action (here "**Sample**") a window opens.
A list of all the selected mice is displayed
Fill in the necessary information and click confirm.

The changes are now updated in the database.

Sample

Sample Mice

Line	Cage		Sex	Mouse N...	Date of Birth
TEST2	(49)	A	M		11-30-2006
TEST2	(49)	A	M		11-30-2006
TEST2	(55)	A	M	45	03-09-2007
TEST2	(62)	A	F	46	03-09-2007
TEST2	(62)	R	F	49	03-09-2007
TEST2	(62)	A	F	50	03-09-2007

A : Available   B : Breeding   R : Reserved

Sample Date: Nov 6, 2007

Tail: ○
Blood: ○
Other: ○ _____

Comment:

6 Mice selected

Cancel   Next

Make a request for a remote line

①

Click on the "Request" button to switch between the 2 modes

REPORT EVENT MODE :
Update directly the database.

REQUEST MODE :
Send a request to the caretaker/line oveeser who will fufill the request (or deny it).

② **Drag** the selection in the drop box

Once in the "drop box",
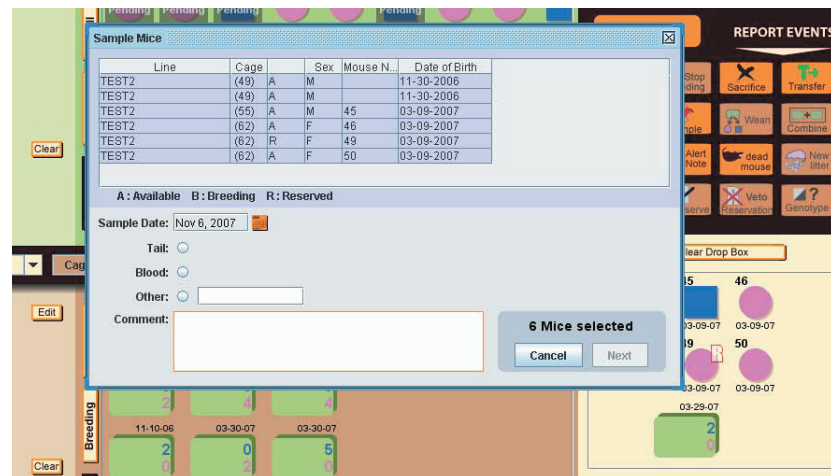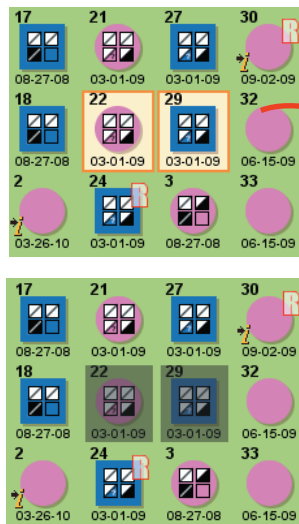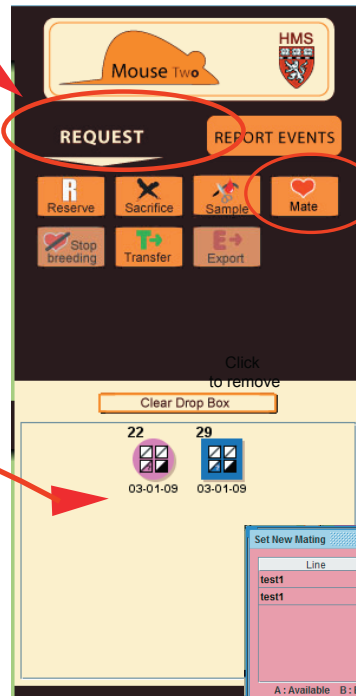The selected mice are no longer selectable in the main line window

③ **Select the requestion action and confirm**

Click to remove

Clear Drop Box

Set New Mating

Line	Cage	Mouse	Aire (KO)	IL-7RaTG1 (...	GFP (Tg)	Foxp3 (Tg)
test1	03-22	A	03-01 22	-,-	*,*	*,?	*,/Tg
test1	03-22	A	03-01 29	-,-	*,*	*,?	*,/Tg

A : Available   B : Breeding   R : Reserved

Breeding Number: 6

Comment:

2 Mice selected

Cancel   Request
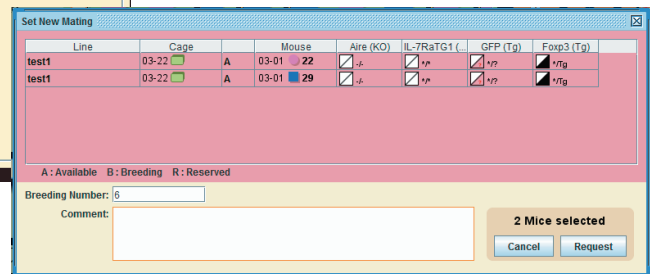
Check ongoing request status

Manage My Requests

| Pending | Confirmed | Denied |

Date	Type	Line
Aug 17, 2010	✖	test1
Aug 17, 2010	♥	test1

Cancel Request

Refresh   Close
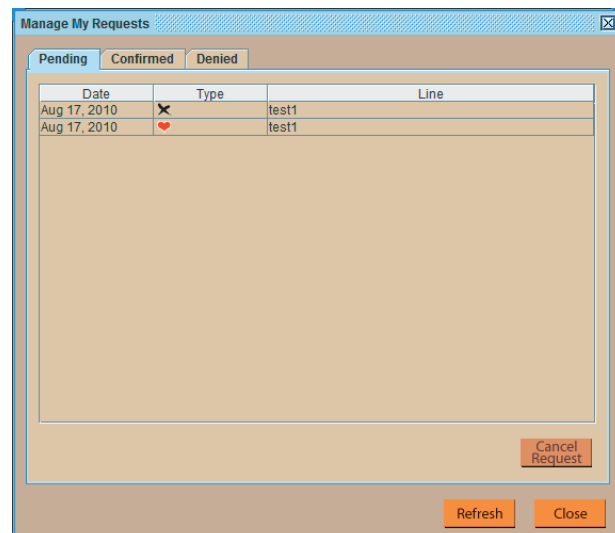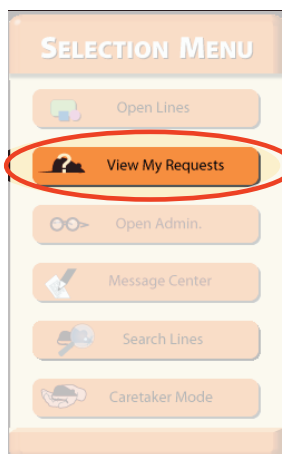
Caretaker view access (Remote line)

Management View

Caretaker View

REQUESTS:
Allows the caretaker to :

- View, print a list of requests
- Deny, fulfill or schedule them

MAINTENANCE:
Allows the caretaker to :

- Update the database on mouse/cage status
- Notify/ send alerts

Manage Requests (Remote line)

View, schedule, fulfill or deny requests

Switch to
maintenance window

①

VIEW REQUESTS

②

REQUESTS DETAILS

③

MANAGE REQUESTS

Choose between...

Choose the list to display:

Click on **"View"**
to display the request details
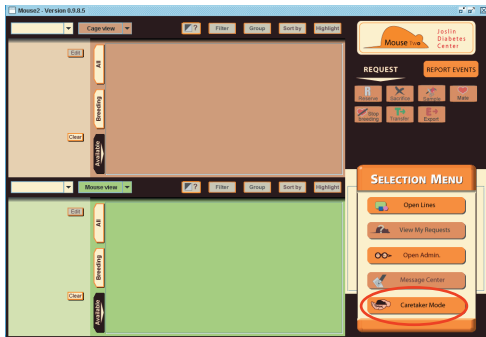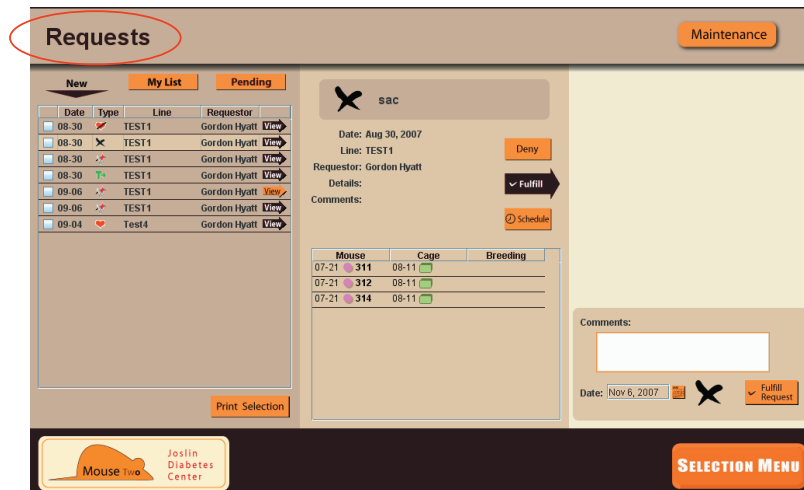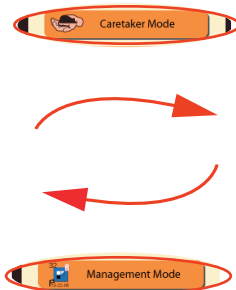
Deny request

Denial Reason (Required):

Date: Nov 12, 2007

Deny Request

New	**My list**	**Pending**
New requests for THIS user	Requests THIS user has scheduled	All requests

A reason must be enterted e.g. mouse dead)
The request will be removed from the list

New   **My List**   **Pending**

	Date	Type	Line	Requestor	
☐	08-30		TEST1	Gordon Hyatt	View
☐	08-30	✗	TEST1	Gordon Hyatt	View
☐	08-30		TEST1	Gordon Hyatt	View
☐	08-30	T+	TEST1	Gordon Hyatt	View
☐	09-06		TEST1	Gordon Hyatt	View
☐	09-06		TEST1	Gordon Hyatt	View
☐	09-04	♥	Test4	Gordon Hyatt	View

Print Selection

sample

Date: Sep 6, 2007
Line: TEST1
Requestor: Gordon Hyatt
Details:
Comments: null

Deny

✓ Fulfill

⏱ Schedule

Mouse	Cage	Breeding
08-26 ● **(531)**	09-17	
08-26 ● **(532)**	09-17	
08-26 ● **(533)**	09-17	
08-26 ● **(534)**	09-17	

Fulfill request

Comments:

Date: Nov 12, 2007

Fulfill Request

The request will be removed from the list
and the database updated with the
corresponding changes.

Schedule request

Comments:

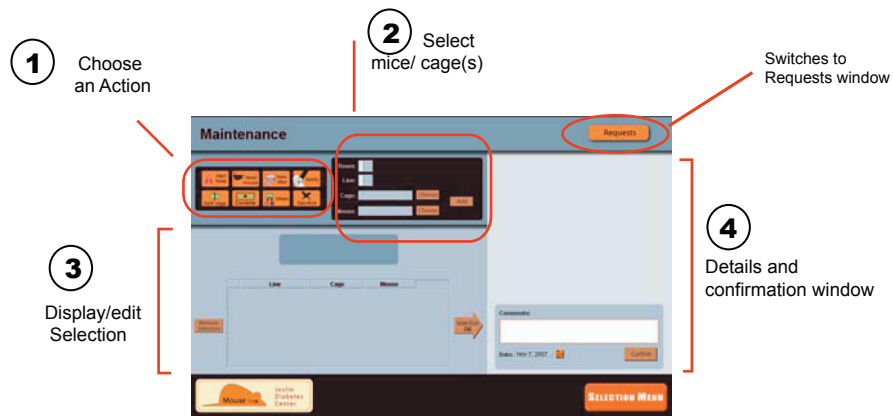Date: Nov 12, 2007

Schedule Request

The request will disappear from "new"
and display in "my list"

To print a request (and its details):
- Check to select the requests to be printed
- Hit the " **Print selection**" button

mouse

November, 2007

Su	M	T	W	T	F	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

Date: Nov 12, 2007

By default the date all actions will be recorded
as today's date .
The date can be edited can be modified using
the "calendar button" before confirming the action .

Maintain a line (Remote line)

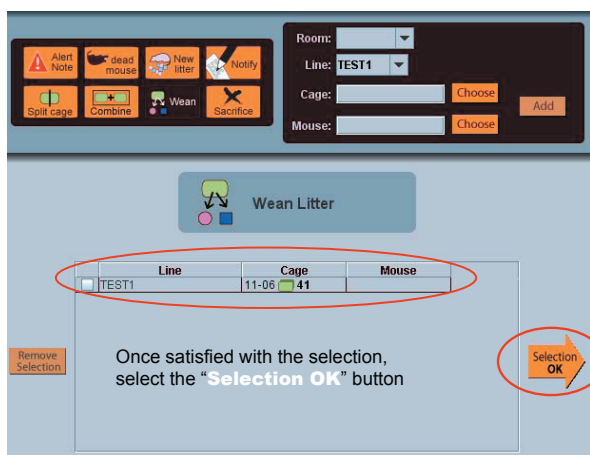## Update line information such as death/ birth, weaning, cage separation, etc.

1 Choose an Action

2 Select mice/ cage(s)

Switches to Requests window

3 Display/edit Selection

4 Details and confirmation window

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1 **Select one of the options,**
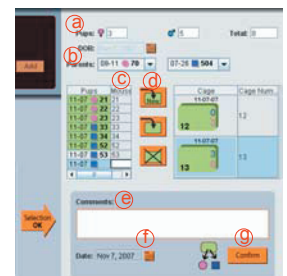The selected action will appear in the display window

2 **Select mice/ cages** you want to update by choosing
- room number (optional)
- Line (required)
- cage or mouse (required) :
    - Enter the mouse cage number directly and select "**Add**"
or - Click on the "**Choose**" button. A window opens with a list of selectable items. click one or more mouse/ cage to select it, then "**Add**".

3 **The list of selected items is displayed.**

- To remove an item check the case on its left side and use the "**Remove selection**" button.

- To add and item repeat the selection process as in ②

Once satisfied with the selection, select the "Selection OK" button

4 Fill in the corresponding details and **confirm**

In the case of weaning a litter:

a - Enter the number of males/ females
b - Select the parents
c - Enter a mouse number (optional)
d - Assign cages for the weaned mice (required)
e - Add a comment (optional)

f - Set the weaning date (optional, by default the current date)
g - CONFIRM

THE CHANGES ARE NOW UPDATED IN THE DATABASE.