

A Tale For TV

My History With ~~Tivo~~ MythTV

By Wes Hardaker

Those of you that have followed my facebook or blog posts from the last few weeks.... shhhhhhhhhhhhh.....



T-10 Years (All times approximate)

- Bought a series 1 Tivo.
 - Loved it.
 - Awesome remote.
 - Easy to use.
 - Flawless.
- ~40 Hrs recording time
 - Assuming the worst compression
 - Which you don't want
- One Tuner (SD)

PHILIPS PERSONAL TV RECEIVER



T-9.5 Years

- A 40G drive just isn't big enough.
- Bought a third-party disk bracket and cables
- Bought a 120G drive (I think)
- Used Tivo Hacking Software to mod the box
 - Felt like true h(cr)acking
 - ie “they” didn't want me to
- Also bought a life-time subscription

T-7.5 Years

- My Installed Hard Disk Broke
- Used the Tivo hacking software to revert to 40G
- Really missed the extra space
(and the deleted shows)

T-7 years (really really ish)

- Had a Fedora machine and tried myth
 - Add atrpms repo
 - `# yum install mythtv`
- MythTV impressions with no tuner and an LCD
 - Found it very very easy to install
 - Worked out of the, er, box
 - Easy to use on-screen menu
- Decided to make the switch

Bought and Build a New System

- Actually, it was my first built from scratch
 - Media case for the family room
 - 500G of disk
 - CPU/motherboard combo deal from Fry's
 - 1 Haupauge SD tuner
 - Which came with a remote and IR Receiver
 - Video card with SD output

 SILVERSTONE



● LG



POWER



RESET



HDD





INPUT



DVD



CD



TUNER



PHONO

INPUT SELECTOR



DIGITAL INPUT

E MONITOR



Setup Experiences

- It was very easy to get installed
- It was less easy to get it perfect
 - I was a geek. I couldn't leave it “as is”.
- Challenges
 - Setting up the IR receiver is a pain
 - Not well documented
 - Lots of trial and error
 - Getting TV guide data was difficult
 - MythTV has a gazzzzzillion options
 - You don't **need** to change them, but... I'm a geek

MythTV Impressions

- Video Playback
 - Plays recorded shows, mpgs, DVD ISOs, etc.
 - Rocks
 - Commercial flagging/skipping: no words good enough.
- Image Database
 - Is very good. Display all your folders on your TV!
- Music
 - Wonderful to have
 - The interface leaves a lot to be desired

MythTV Impressions

- Web browser interface
 - Usable. But that's about it.
 - It's better to launch firefox instead and use a mouse
- Information Center
 - RSS Reader: don't use it; computers are better
 - Weather: have used it and is nice
 - (these days my phone is closer)
- Archiving
 - It's easy to burn shows to DVDs
 - Can be tricky to figure out why it doesn't work

MythTV Impressions

- Myth Game
 - Game “browser” is functionally a “launcher”
 - Built in MAME browsing list
 - Can launch native games (eg, supertux)
- Myth NetVision
 - Search youtube, etc
- Anything you want
 - Menus are encoded in XML
 - You can add custom commands to them

MythTV Recording

- The Recording interface is super powerful
 - Beats other systems hands down
 - Record by the common keywords, shows, etc
 - Super power searches as well
 - Record all movies rated 4 stars and higher
 - Any SQL expression for the really brave
- MythWish
 - A perl script to look for a list of things
 - Examples “best episodes from friends and seinfeld”
 - Records all “new” shows (first episodes)

T-6.5 Years

- Added a second SD tuner card
 - Myth is VERY smart about prioritization
 - Each show gets a priority level
 - Can intelligently determine what to record based on the entire schedule database
 - EG: 2 shows now (only) but a later show of a third
 - Typically only records never seen episodes
- Added a 750G disk for more storage
 - It's (now) easy to add more storage directories
 - Myth ensures there is always some free space in each to start a new recording

Show Deletion

- Typical usage:
 - Finish watching a show
 - “Delete” it
 - It actually gets deleted later when space is needed
 - Lower priority shows get deleted first
- When the disks are full
 - Lower priority shows get deleted to make room
 - Problematic as it always deletes/records/deletes...

T-6.75 Years

- Set up “Myth Web”
 - Web based front end to the myth data
 - Schedule, delete, manage recordings
 - Much easier than typing using a remote
 - Download shows

T-6 Years

(You know I'm basically making the years up right?)

- Big problem: random crashes
 - Brings down the whole machine
 - Kernel lockup
 - Seems that it's during heavy usage
- Resolution: new mother board
 - After much much searching:
 - It was the cheap mother board
 - Replaced with an decent ASUS motherboard
 - All is well.
- **Important Lesson: Do NOT skimp on hardware.**

T-4 Years

- Added a 1.5Tb Disk.
- Capacity now:
 - $.5 + .75 + 1.5 = 2\text{Tb}$
 - Started storing whole series of episodes to watch
 - Summer wasn't “reruns” for us
 - (it was shows we recorded during the full seasons)
 - Summer was “less favorites, but still good”

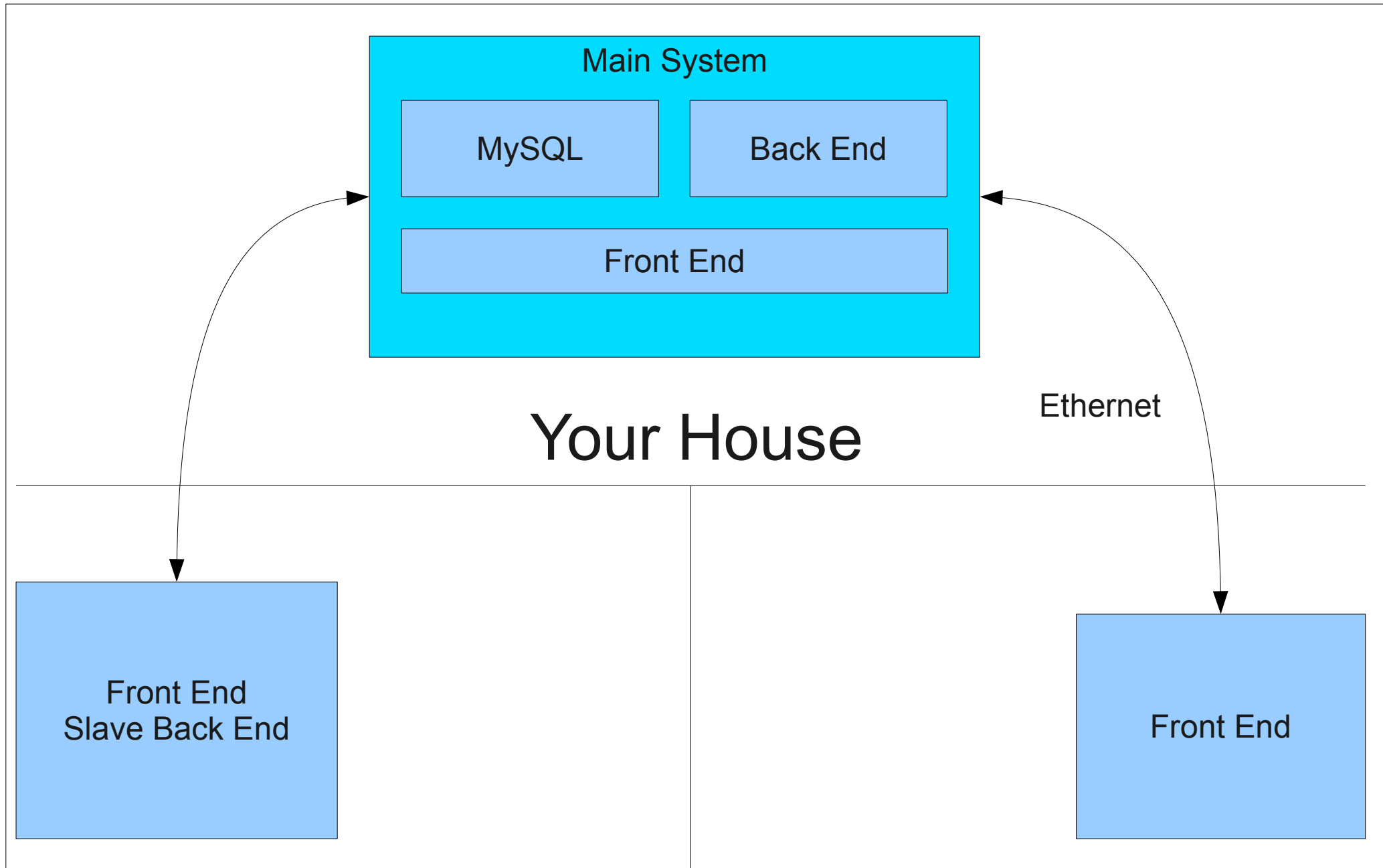
T-3 Years

- My mother-in-law got a new machine
- She *had* a WinME era system
- I took her old system “off her hands” for her
 - Threw in a new drive
 - Threw in a cheap graphics card
 - Put it in our bedroom
- The result:
 - My first second “MythTV Front End”

MythTV Architecture

- MySQL: stores all information
- Back-end
 - Has tuners
 - Is a daemon
 - Records and stores shows
 - Can be “woken up” by schedule or a master BE
- Front-end
 - The GUI interface to actually do things
- Typically: people have 1 FE/BE combination
 - (and often more front ends as well)

MythTV Architecture



T-1 Year

- Finally came into the HD era
- Bought 1 Silicon Dust HDHomerun Recorder
 - Really cool boxes! Sits on the net in the house.
 - Tuners now at 2 SD + 2 HD.
 - No conflicts!
 - Really really really painful to set up
 - Entirely comcast's fault

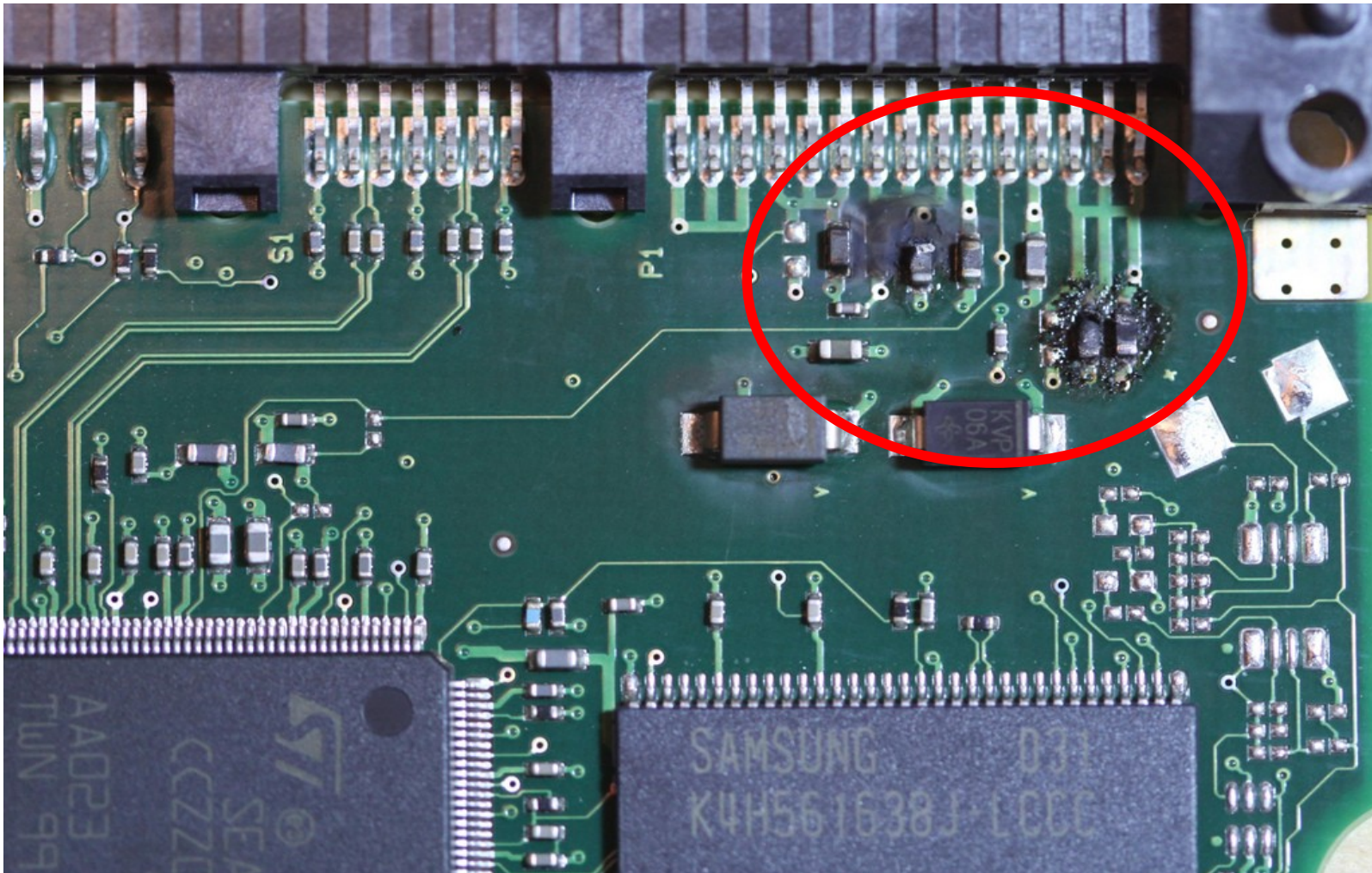


T-5 Months

- Decided the .5G disk was too old
 - Replace early, replace often
- Every manufacturer is failing quality
- Decided on a RAID
 - 1 WD and 1 Seagate: 2TB disks
 - Both Low Power disks (which was new)
 - RAID1 of just over 1TB, with 2TB non-raided
 - Geek humor: $2 + 2 = 3$
 - Used linux MD raid, not hardware
- Total drives now at 5.5TB

T-2 Weeks

- I was in Prague at the IETF...



T-1 Week

- Returned Home
- Believed it was the PS
 - Replaced it
- Probably the motherboard?
 - Replaced it. And the CPU and the Memory.
- Drives wouldn't spin up. All **THREE.**

T-4 days

- System fully back up from an older backup
 - 3x 2TB Drives
- Myth Data
 - Gone
- Months of Email
 - Gone
- Recent system improvements
 - Gone

T-0 Seconds

- Still no shows recorded
 - Haven't had time to “finish” fixing myth
 - Thus can't show you half the things I wanted to
 - :-)

Tivo

vs

MythTV

- Easy to use
- Easy to setup (30 min)
- Buy hardware; done
 - Can't add more later
- Extra money needed for monthly subscription
- They're way is good
- You get what you get
- FF through commercials
- One screen

- Easy to use
- Hard to setup (Hours)
- Expandable over time
 - Add components later
- Extra money goes to making it better
- Customizable
- Full OS on your TV
- Auto-skip commercials
- Multiple front-ends

Other Cool MythTV Benefits

- Themes
- Editing (cut/edit shows)
- Shows are functionally .mpgs on your drive
 - I take shows on trips on my laptop
 - I do this All. The. Time.
 - I resize them and put them on my phone
 - I resize kids shows and put them on my kids rockbox
 - This is one of the biggest benefits, IMHO
-

Mon 26 November, 00:47



Watch TV

Play DVD

Listen to Music

Watch Recordings

Manage Recordings

Utilities / Setup



MythTV



CD/DVD



Utilities / Setup



Watch TV



Media Library



Manage Recordings



Comedy

TED Talks

Filme

Laimas Sendungen

Mediathek

Aufnahmen verwalten

Informationen

CD/DVD



Wed Sep 8 2010

19:30





Firefly

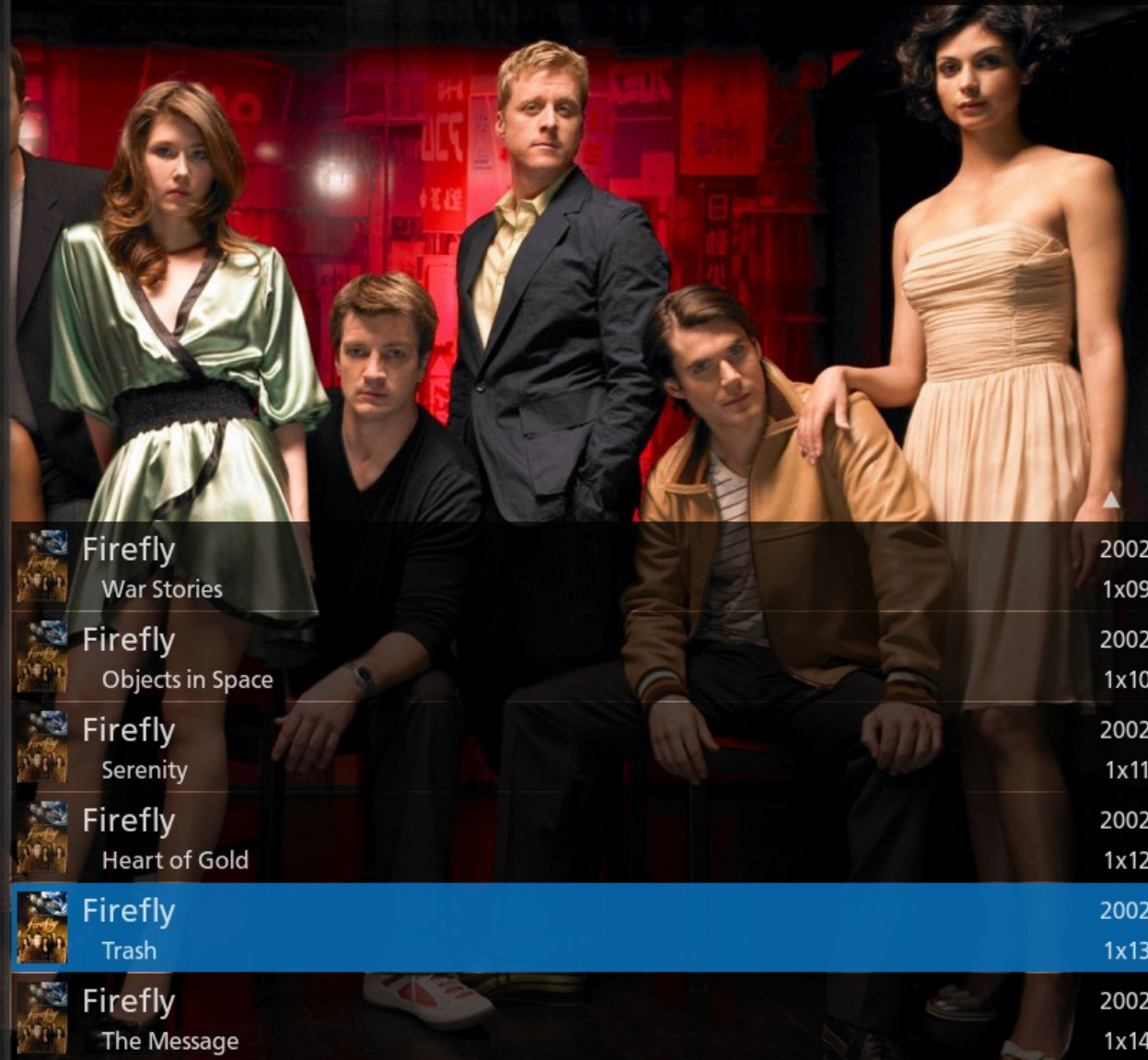
Trash

Season/Episode: 1x13

Directed by Vern Gillum

Saffron (from "Our Mrs. Reynolds") returns - after Mal breaks up her current gig, she convinces him and the crew to help out with a "perfect crime" that isn't. The crime: go to Bellerophon and steal a criminal's prototype laser gun from his collection. The plan: Saffron and Mal sneak in and dump the gun down the trash, bypassing security, and the Serenity crew grab it from the disposal system. Of course, this is Saffron, and it turns out she's married to the crook, Durran, and plans to double-cross Mal. Things don't work out so well and Saffron strands Mal naked in the desert. Fortunately Mal and Inara anticipated a betrayal and set it up so Inara grabs the gun, leaves Saffron behind, and rescues Mal.

Starring: Nathan Fillion, Jewel Staite, Summer Glau, Ron Glass, Morena Baccarin, Sean Maher, Gina Torres, Alan Tudyk, Adam Baldwin, Franc Ross, Christina Hendricks, John Bentley, Dwier...



	Firefly	2002
	War Stories	1x09
	Firefly	2002
	Objects in Space	1x10
	Firefly	2002
	Serenity	1x11
	Firefly	2002
	Heart of Gold	1x12
	Firefly	2002
	Trash	1x13
	Firefly	2002
	The Message	1x14

Demostrations

- Myth Web
- Myth TV Front End



Currently Browsing: Mon Apr 18, 2011, 07:00 AM

Jump To:

07:00 AM

Mon Apr 18, 2011

◀ 07:00 AM 07:15 AM 07:30 AM 07:45 AM 08:00 AM 08:15 AM 08:30 AM 08:45 AM 09:00 AM 09:15 AM 09:30 AM 09:45 AM ▶

 2	Randolph Duke Spirited Fashion <i>(Rerun)</i>		Mary J. Blige, My Life Fragrance <i>(Rerun)</i>			
 3	Today		Live With Regis and Kelly: Fun, Sporty Rides			
3.1 (KCRAHD)	Today		Live With Regis and Kelly: Fun, Sporty Rides			
3.2 (WX Plus)	NO DATA					
4 (KQCA)	KCRA 3 News at 7am <i>(Rerun)</i>		KCRA 3 News at 8am <i>(Rerun)</i>		The Dr. Oz Show: What Would You Do? Dr. Oz Goes Under Cover to See How People Handle Uncomfortable Situations	
6 (KVIE6)	Arthur: Francine's Split Decision; Muffy Goes Metropolitan <i>(Rerun)</i>	Clifford the Big Red Dog: T-Bone, Dog About Town; Clifford's Big Heart <i>(Rerun)</i>	Curious George: George Digs Worms; Everything Old Is New Again <i>(Rerun)</i>	The Cat in the Hat Knows a Lot About That!: Chasing Rainbows; Follow the Prints <i>(Rerun)</i>	Super Why!: Dr. Dolittle <i>(Rerun)</i>	Dinosaur Train: Pteranodon Family World Tour; Gilbert the Junior Conductor <i>(Rerun)</i>
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Display: Scheduled Duplicates/Ignored Deactivated Conflicts

All groups All titles

Status	Title	Channel	Record Date	Record Length		
Mon Apr 18, 2011						
hdhr1	Man vs. Wild: Borneo Jungle	14 - The Discovery Channel (Pacific)	Mon Apr 18, 2011 (05:00 PM)	1 hr	<input type="button" value="Don't Record"/>	<input type="button" value="Never Record"/>
hdhr1	Chuck: Chuck Versus the Wedding Planner	3.1 - KCRA	Mon Apr 18, 2011 (08:00 PM)	1 hr	<input type="button" value="Don't Record"/>	<input type="button" value="Never Record"/>
Conflict	House: Last Temptation	40.1 - KTXL-HD	Mon Apr 18, 2011 (08:00 PM)	1 hr	<input type="button" value="Record This"/>	<input type="button" value="Never Record"/>
hdhr2	Two and a Half Men	40.1 - KTXL-HD	Mon Apr 18, 2011 (08:00 PM)	31 mins	<input type="button" value="Don't Record"/>	<input type="button" value="Never Record"/>
hdhr2	Mike & Molly: S	40.1 - KTXL-HD	Mon Apr 18, 2011 (08:31 PM)	29 mins	<input type="button" value="Don't Record"/>	<input type="button" value="Never Record"/>
hdhr1	Hawaii Five-0:	40.1 - KTXL-HD	Mon Apr 18, 2011 (09:00 PM)	1 hr	<input type="button" value="Don't Record"/>	<input type="button" value="Never Record"/>
Tue Apr 19, 2011						
hdhr1	Glee: A Night o	40.1 - KTXL-HD	Tue Apr 19, 2011 (08:00 PM)	1 hr 1 min	<input type="button" value="Don't Record"/>	<input type="button" value="Never Record"/>
hdhr1	Raising Hope:	40.1 - KTXL-HD	Tue Apr 19, 2011 (09:01 PM)	30 mins	<input type="button" value="Don't Record"/>	<input type="button" value="Never Record"/>
Wed Apr 20, 2011						
hdhr1	Two and a Hal	40.1 - KTXL-HD	Wed Apr 20, 2011 (07:00 PM)	30 mins	<input type="button" value="Don't Record"/>	<input type="button" value="Never Record"/>
hdhr1	American Idol: Seven Finalists Compete	40.1 - KTXL-HD	Wed Apr 20, 2011 (08:00 PM)	1 hr 30 mins	<input type="button" value="Don't Record"/>	<input type="button" value="Never Record"/>
Conflict	Burn Notice: Dead Drop	58.1 -	Wed Apr 20, 2011 (08:00 PM)	1 hr	<input type="button" value="Record This"/>	<input type="button" value="Never Record"/>
Conflict	Burn Notice: Dead Drop	4 - KQCA	Wed Apr 20, 2011 (08:00 PM)	1 hr	<input type="button" value="Record This"/>	<input type="button" value="Never Record"/>
hdhr2	Better With You: Better With Lying	10.1 - KXTV	Wed Apr 20, 2011 (08:30 PM)	30 mins	<input type="button" value="Don't Record"/>	<input type="button" value="Never Record"/>
hdhr2	Burn Notice: Loose Ends	4 - KQCA	Wed Apr 20, 2011 (09:00 PM)	1 hr	<input type="button" value="Don't Record"/>	<input type="button" value="Never Record"/>

House: Last Temptation

Airtime: 08:00 PM to 09:00 PM
 Channel: 40.1 - KTXL-HD
 Title: House
 Subtitle: Last Temptation
 Description: Masters must decide if she wants to be a surgeon or officially join House's team; a 16-year-old collapses days before embarking on a sailing tour of the globe. (TV-14, CC, Stereo)
 Original Airdate: 2011-04-18
 Category: Drama
 Schedule: Record at any time on any channel.
 Recording Priority 6
 Notes: Another program with a higher recording priority will be recorded.



Show group: Deleted (171 recordings) **Show recordings:** The Big Bang Theory (7 episodes)

	Title	Subtitle	Program ID	Original Airdate ↓	Airdate	Channel	Recording Group	Length	File Size	
	The Big Bang Theory	The Robotic Manipulation	EP009311820068	2010-09-23	Thu Sep 23, 2010 (07:00 PM)	13.1 - KOVR	Deleted	32 mins	3.9 GB	Delete
	Penny tags along on Sheldon's first date; Wolowitz finds a new use for a robotic arm.							Delete + Rerecord		
	The Big Bang Theory	The Zazy Substitution	EP009311820070	2010-10-07	Thu Oct 7, 2010 (07:00 PM)	13.1 - KOVR	Deleted	32 mins	3.9 GB	Delete
	When Sheldon searches for an alternative to human companionship, the guys become concerned.							Delete + Rerecord		
	The Big Bang Theory	The Hot Troll Deviation	EP009311820071	2010-10-14	Thu Oct 14, 2010 (07:00 PM)	13.1 - KOVR	Deleted	32 mins	4 GB	Delete
	An embarrassing secret of Wolowitz's is revealed; Raj and Sheldon get into a war at work.							Delete + Rerecord		
	The Big Bang Theory	The Irish Pub Formulation	EP009311820073	2010-10-28	Thu Oct 28, 2010 (07:00 PM)	13.1 - KOVR	Deleted	32 mins	3.9 GB	Delete
	Leonard keeps an affair a secret from Sheldon, Howard and Raj.							Delete + Rerecord		
	The Big Bang Theory	The Apology Insufficiency	EP009311820074	2010-11-04	Thu Nov 4, 2010 (07:00 PM)	13.1 - KOVR	Deleted	32 mins	3.9 GB	Delete
	Sheldon's interview with the FBI jeopardizes Wolowitz's security clearance.							Delete + Rerecord		
	The Big Bang Theory	The 21-Second Excitation	EP009311820075	2010-11-11	Thu Nov 11, 2010 (07:00 PM)	13.1 - KOVR	Deleted	32 mins	3.9 GB	Delete
	While the guys camp out for a long-awaited movie screening, Penny and Bernadette invite Amy to her first slumber party.							Delete + Rerecord		

T+2to5 Years

- The future of TV shows will change
- The net finally will become the distribution method
 - Connections are getting faster
 - Video is the last bandwidth hurdle
 - A lot of content is available today over the net
 - Hulu, netflix, amazon, youtube, ...
- DRM effects remain to be seen
 - Most cable channels are being encrypted
 - None of the commercial over-the-net is DRM free
- People or working on it. Can they succeed?

Questions?