Patch workflow

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Patch workflow

- Patches sent to linux-media@vger.kernel.org are stored at patchwork.linuxtv.org, tagged as "New".

  - Mangled patches are silently discarded;

- Patches are converted locally into a quilt tree;

- After reviewing a patch, they're tagged to reflect its review status;

- Currently, patchwork "delegation" feature is not used.

Patch workflow (2)

- Main patch status:
  - **New**: Patches not yet reviewed;
  - **Under review**: someone is expected to be reviewing it (driver's maintainer).
    - Unfortunately, patchwork doesn't have a field to indicate who will be reviewing it. It does have a field that indicates to whom a patch got delegated.
    - There's no process to warn the driver's maintainer about that patch: it is all manual;
  - **Superseded**: when the same patch is sent twice, or a new version/git pull was sent; the old ones are targeted as superseded;
  - **Obsoleted**: patch doesn't apply anymore or the patched driver doesn't exist anymore.
  - **Changes requested**: when someone requests changes at the patch;
  - **Rejected**: When the patch is wrong or doesn't apply;
  - **RFC**: patches where the maintainer doesn't need to handle;
  - **Not Applicable**: patches that aren't meant to be applicable via the media-tree.git;
  - **Accepted**: when patch is merged; when driver maintainer says that the patch will be applied via his tree;
    - Fixes go through a different tree, and only sent upstream when they're about to get merged.

Patch merge scripts

- All patches come from Patchwork

- They got converted into a quilt tree

- Script assisted:

  - get_linux_media

    – Uses pwclient to list New/Under Review patches;

    – Syncs my quilt tree from patchwork

  - show_next – very simple script:

    – cat `quilt next`|colordiff

      or (for very complex patches)

    – kompare `quilt next`

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Patch merge scripts (2)

- test_patch – checks several things at the patch

  - Display, the relevant patch headers, SOB's, ACK's;

  - Tests if patch applies (and if it is at -p1 or -p2) format, or if it was already applied;

  - Runs scripts/checkpatch.pl;

  - Checks similar patches at quilt;

  - Search for message replies;

  - Search messages on my local IMAP server with the same subject;

  - Get the driver maintainers, as listed at MAINTAINERS (excluding myself)

Examples

```
v4l@pedra ~/v4l/patchwork $ test_patch
testing if patches/lmml_15124_omap3isp_preview_add_support_for_8_bit_formats_at_the_si
nk_pad.patch applies
patch -p1 -i patches/lmml_15124_omap3isp_preview_add_support_for_8_bit_formats_at_the_
sink_pad.patch --dry-run -t -N
patching file drivers/media/platform/omap3isp/isppreview.c
 drivers/media/platform/omap3isp/isppreview.c |   37 +++++++++++++++++---------
 1 file changed, 26 insertions(+), 11 deletions(-)
Subject: omap3isp: preview: Add support for 8-bit formats at the sink pad
From: Laurent Pinchart <laurent.pinchart@ideasonboard.com>
Patchwork: http://patchwork.linuxtv.org/patch/15124/
Date: Tue, 23 Oct 2012 10:23:39 -0000
Signed-off-by: Laurent Pinchart <laurent.pinchart@ideasonboard.com>
Patch applies OK
total: 0 errors, 0 warnings, 94 lines checked

patches/lmml_15124_omap3isp_preview_add_support_for_8_bit_formats_at_the_sink_pad.patc
h has no obvious style problems and is ready for submission.
Found message(s) 141686 141764
Subject: [PATCH v2] omap3isp: preview: Add support for 8-bit formats at the sink pad
        <1350997862-18880-1-git-send-email-laurent.pinchart@ideasonboard.com>
Subject: Re: [PATCH v2] omap3isp: preview: Add support for 8-bit formats at
        <20121024171208.GB23933@valkosipuli.retiisi.org.uk>
Found message(s) 141684 141686 141764
Subject: [PATCH] omap3isp: preview: Add support for 8-bit formats at the sink pad
        <1350991419-23028-1-git-send-email-laurent.pinchart@ideasonboard.com>
Subject: [PATCH v2] omap3isp: preview: Add support for 8-bit formats at the sink pad
        <1350997862-18880-1-git-send-email-laurent.pinchart@ideasonboard.com>
Subject: Re: [PATCH v2] omap3isp: preview: Add support for 8-bit formats at
        <20121024171208.GB23933@valkosipuli.retiisi.org.uk>
Laurent Pinchart <laurent.pinchart@ideasonboard.com> (maintainer:OMAP IMAGE SIGNAL...)
Duplicated md5sum patches
Likely duplicated patches (need manual check)
```
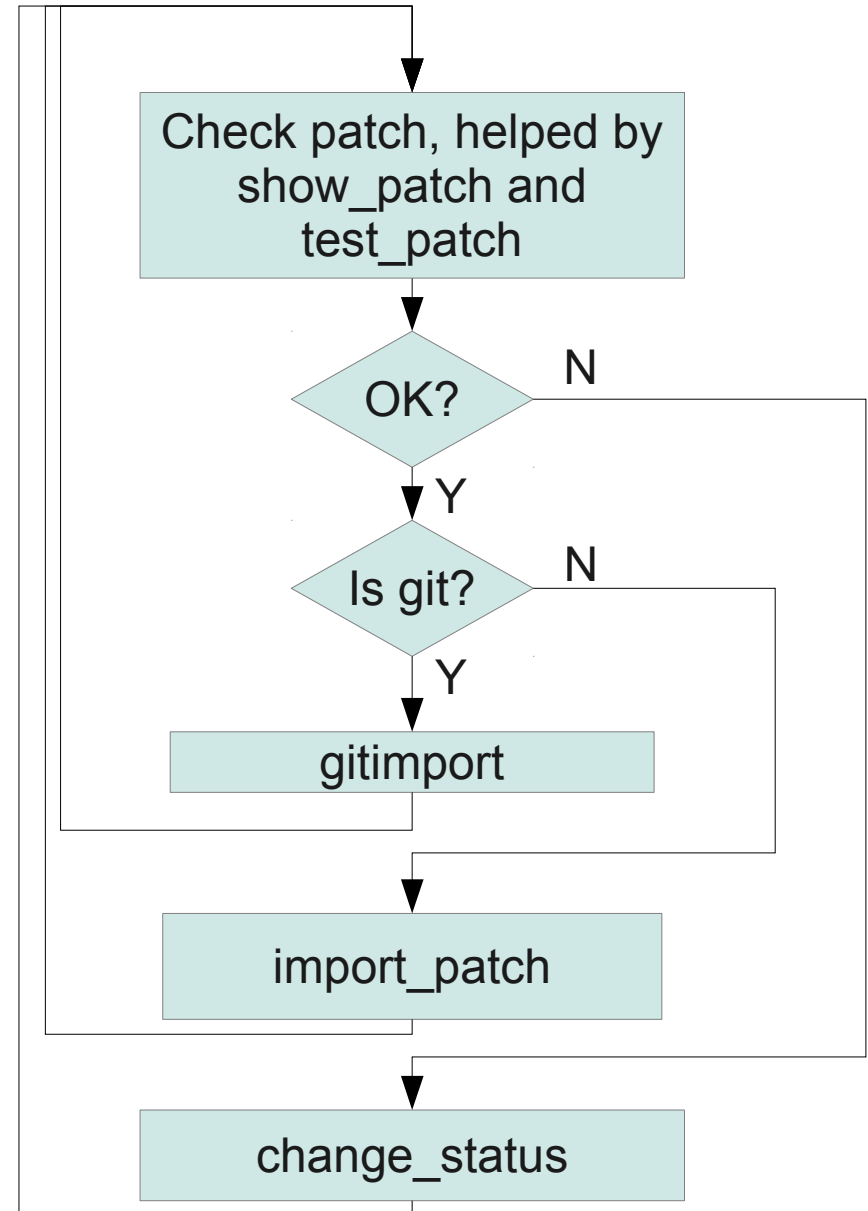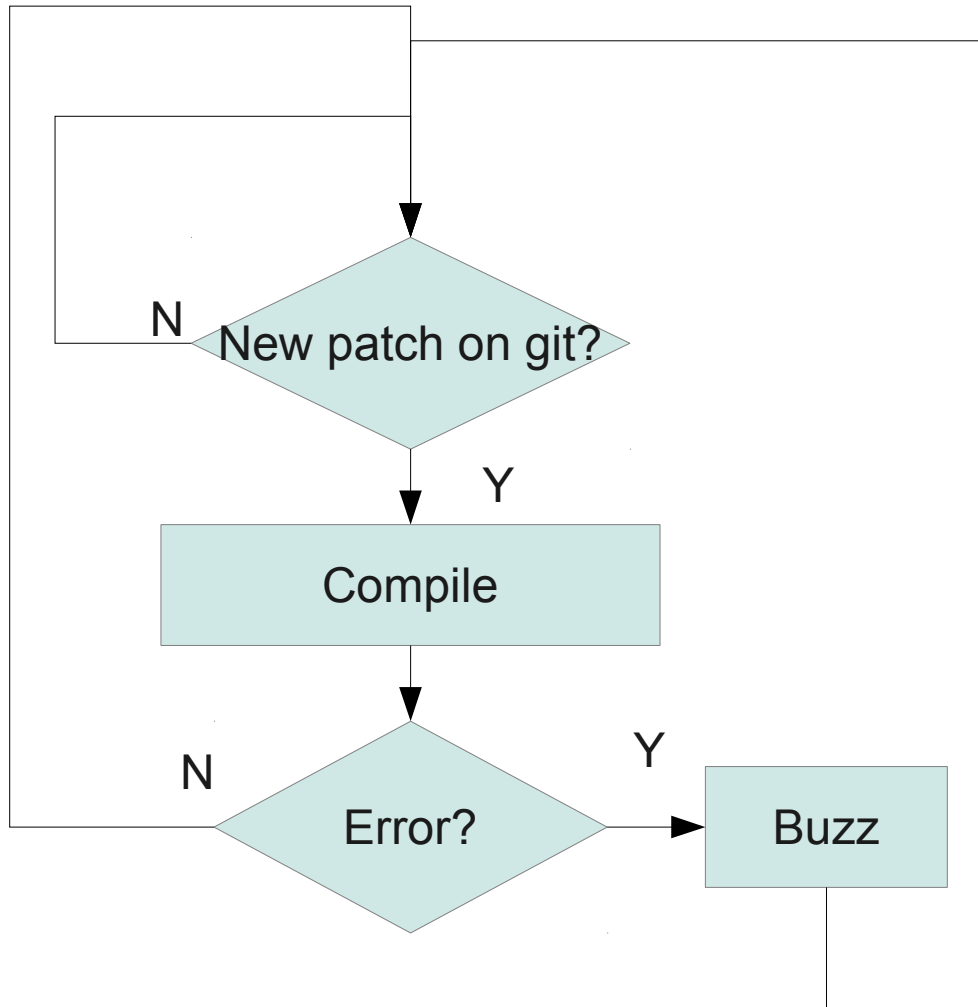
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Patch merge scripts (3)

- import_patch – applies the first patch from quilt
  - Checks if patch got tested;
  - Preserve patch timestamps/authorship;
  - Do a few other consistency checks;
  - Adds [media] prefix;
  - Prepare to update patchwork
- change_status – changes pathwork status
  - Runs in "local mode": updates a local file
    - There is a "flush" parameter to update main server
- gitimport – handles a "git pull" email
- ancillary scripts (githead.pl; search_msg.pl)

Patch merge scripts (4)

- quick_compile.sh
  - Compiles all media drivers, including staging ones
    - By default: i386. Also supports x86_64
  - auto_compile
    - Detects a new git merge and runs quick_compile.sh
    - Plays audio and prints error in RED when bad things hapen.

Simplified proccess

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Patch workflow discussions

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Ideas for brainstorm

- Have 2 or 3 sub-maintainers for drivers

- Have more SOB's at core changes

- Use delegation at patchwork

- Having someone adding more features at patchwork

  - Fixing delegation to associate it with an ACL;

  - Improve "under review" to store/notify about who is reviewing a patch;

  - Fix it to either notify when a new patch arrives, and/or when a bad patch got discarded;

- Use branch topics;

- Comments? What else?