Hi Uli,

Thank you for your interest. I haven't thought much about this. Presumably the starting point would be an input list of highly(?) sampled lightcurves covering some spatial and temporal window in the survey. E.g., this file would look like:

name | ra | dec | mjd | mag | filterid | fieldid | ccdid | quadid
sn1 1.234567 -4.345678 57467.3865351 17.123 1 1234 14 4
sn1 1.234567 -4.345678 57467.3875351 18.123 1 1234 14 4
sn1 1.234567 -4.345678 57467.3885351 19.123 1 1234 14 4
…
sn2 355.234567 64.345678 57467.3945351 15.123 2 981 2 1
sn2 355.234567 64.345678 57467.3955351 15.623 2 981 2 1
sn2 355.234567 64.345678 57467.3965351 16.223 2 981 2 1
….

The "fieldid | ccdid | quadid" are identifiers that come from the master sky-tiling grid. I can provide you this file (for now, I generate this using Eran's pointing grid). Having these identifiers facilitates fast lookup in the pipeline during processing of a quad image. filterid=1,2 for g,R respectively.

A script or software module would then be called in the pipeline that will:
* read the above file and store the appropriate rows straddling the image being processed (specific filter, obsmjd+/-10min?, field, ccdid, quadid);
* read in the astrometrically and photometrically calibrated image (with it's ZP)
* also read in it's accompanying PSF (stamp image or analytic function based on FWHM?)
* linearly interpolate the mag value to the specific image obsmjd.
* grab psf-stamp and rescale such that its integrated flux is in DN (using image ZP to convert mag to DN).
* add this stamp it to the science image, i.e., by mapping the ra,dec position to the nearest center pixel x,y.
* using the above truth list, we (ipac) need to tag these "fake events" in the database and not propagate them to ztf-depot for the scanners. You can use a separate script to query the users-database to recover them.

I'm designing this as I write this. I welcome your thoughts. The important thing is that it doesn't create a bottleneck in the pipeline. We should also have an option to switch this off.

Regards, Frank

> On Feb 8, 2017, at 7:30 AM, Ulrich Feindt <ulrich.feindt@fysik.su.se> wrote:
>
> Hi Frank,
>
> On Eric's list of unclaimed projects I saw the fake transient injection pipeline. Since this would be useful for study of large statistical samples, I might be interested in this. Can you tell me a bit more about what needs to be done?
> I'm planning to spend some time at Caltech this summer but it's not clear to me yet what I'll be working on.
>
> Best,
> Uli