Contents

[LineMonitorBot Project Management 1](#_Toc367359911)

[sprint backlogs 1](#_Toc367359912)

[new major features 10](#_Toc367359913)

[done 12](#_Toc367359914)

# LineMonitorBot Project Management

|  |  |  |  |
| --- | --- | --- | --- |
| sprint backlogs | priority | poms | start/pomodoros |
| test case: L-11 105 Clar 20 second, 90 setpoint, 331.8 g, 131.667 lbs/hr |  |  |  |
| **bugs bugs bugs:**  [Bitbucket](https://bitbucket.org/Noumenon72/linemonitorbot/issues?status=new&status=open) | 0 | 1 |  |
| Set next Monday's release. Write user stories.  Mark all features priority 1.  Mix boring and fun tasks.  Tell kcom goals for next week.  Bonuses for finishing? | 0 | 60 (schedule 50) |  |
| see 2.1 | 0.1 | 10.5 |  |
| do a learning todo every 20 pomodoros, or 3 per week | 0.1 | 3 | x |
| search for todos in the code, 3 pomos weekly | 0.1 | 3 |  |
| clean up Lint, 3 pomos weekly | 0.1 | 3 |  |
| find out why you can't get Activity() in coreFragmentTest, it seems to hang in super.onCreate of RollMathActiivty | 2 | 4 | xx |
| go by foot weight, gauge shouldn't matter in roll math. Put a calculate for estimating by the factor. | .1 | 5 | d |
| SIMPLE FEET FROM WEIGHT |  |  |  |
| Mutually Exclusive ViewGroup – code, styling | .1 | 5 | xxx |
| Refactor model  Step 1: break into groups (1 pom)  Step 2: create kitchen (4 poms)  Step 3: add to controller (5 poms) | 0.1 | 10 | Refactor plan:  Change saveModelState to saveJob  CHANGE\_EVENTS come from switching lines, skids, products, number of table skids, and calculating.  addSkid and addWorkOrder can go in a JobController.  *I am putting this on hold, it makes no features and is scary.*  setCurrentSpeed is not part of a Job, exactly, because it affects the production line itself.  well, if we have no state speedvalues to load, we call this on the line's speed values.  It should probably be two functions: one setJobSpeedValues, one setLineSpeedValues. Which mselectedLine.setSpeedValues already is.  I don't see why we save the speed right then and there, it would be saved in saveSelectedLine, which we save whenever we change lines, but not wos. x (planning)  cook()   * setActiveFood(), setActivePlanet(), setActiveRecipe() -- so cook() knows which ones to use   IMO these should be part of the kitchen. The kitchen holds these values and cooks (both because it makes more sense for kitchen to be cooking then it is for the universe to cook stuff, and because kitchen has all the info you need to cook a particular meal. The universe just gets confused as to which meal you want and what's part of what).  workOrder.attachProduct   * notifyViewsThatSomethingChanged() * createFood(), createRecipe() -- from user input.   This sounds like something that a controller should take charge of, IMO.   * saveOrLoadPlanet(), saveOrLoadFood(), saveOrLoadRecipe() -- because none of these objects have methods to persist themselves   These are relevant to persitent storage, which fits nicely into a single concept (which you typically want to keep separate from everything else for multiple reasons). However, you might want to see if you can remove this abstraction from MainModel and make it it's own class. When I did refactoring, stuff like this was easy to pull away from the rest because it usually affects different variables than the rest. |
| Draining xxxx | 1 | 10 | Start: 14 pomos  x – catching up  xx – change hopper and material  x – trying to decide how to put all hopper data in the db.  x – make creating its own class to cut lines.  x – begin entering hoppers. This will take a long time – just do Line 6. Need a separate hopper class for extruder hoppers because of different safe drain times?  xx –extruder hopper class  xxx – populate database  x- user interface  (12 more pomos)  Options:   * premake SQLite database. May break with new phones, don't know how. * import from CSV. May be slow with many statement. * Do all with arrays. Familiar, but tough to keep in order and a lot of data entry. Move create statements to own class?   xxx add to schema and table.  *? Next: add loadHoppers to selected line, or to drainingfragment.*  *rename extruder\_number coextruder\_number*  *Next: is extruder\_number in normal form?* [*insert, delete, update anomaly*](http://en.wikipedia.org/wiki/Database_normalization#Free_the_database_of_modification_anomalies) *where different extruder number in different records. Insert and delete don't trouble me; I can just put in null. I think update is OK: you'll never have two rows describing same hopper, with different extruders.*  At 11 Xs, I had foundered on the vast variety of readings and going to something else.  Draining. User story: user gets to see some hoppers on the draining page as though progress is being made.  A blender has hoppers. An extruder has a hopper. A Novatec has a hopper. A hopper has a Feed Rate, a Volume, a Material (Contents?), and a Setpoint(?). And an Alarm Level. A hopper does *not* have a LetdownRatio. Argh! LetdownRatio should properly be termed "ScrewSize~~Ratio~~Factor". well, hmm. This number is used for "setpoint \* screw size factor = lbs/hr delivered (of 105)". A Novatec has this, but it mostly factors in to the FeedRate. PCBs and extruder hoppers don't.  A Blender has hoppers and (maybe) a recipe with percent setpoints.  An Extruder has an output rate.  A ProductionLine has an Extruder and a Blender and Novatecs.  Task: get rid of LetDown Ratio in insertorupdatenovatec, x  Task: getrid of mReferenceMaterial in novatec. x  Consistency is tough. The high and low times imply 25% different volumes. The volumes are not predicted by the relative densities. Perhaps there is some sort of air factor that doesn't obtain in my cup? Perhaps you can simply fit more resin in because it forms a flatter top instead of a pyramid. What if I use a factor for the resin %? Doesn't help with that I have huge min and max for the same hopper and meterial. Considering using a Capacity\_Resin, Capacity\_Premix, Capacity\_50/50 and interpolating them. Each would have a min-and-max also.  *Do one blender at a time, starting with 11.* x  *Have the extruder hopper have a unique method for returning time, based on the drain factor number.*  *TODO: Remove the "volume" and "alarmVolume" from the constructor and elsewhere. Look up that update in Mercurial. 2*  *Go through and remove all unused fields from classes and database.* |
| Enter Product button must show product on rates page | 1 | 1 |  |
| Get on Play Store | 1 | 6 | You could do the staged rollout thing, but people would have to join google group. |
| Practice demoing app:  Have product filled in.  What it does:   * tells when your skids come off and vibrates 90 seconds before to alert you. * calculates your rates * tells you when your job is done   What to demo:   * You have three tabs. You can swipe from one to the next. * The first keeps track of your times and lets you enter your product details here. (filled in) Then hit calc times to show the finish times. * You can set the alarm to repeating in the settings. * The second calculates your rates (demo)   The third is not hooked up yet, but it is showing the app's database. All the skids you enter are in this table, with their sheet counts and finish times. All the facts about the production lines are in this table – their width, their speed setpoints. This is how the app can calculate how long your job takes. You can switch lines with this menu button. | 2 |  |  |
| write some bug free code | 2 |  |  |
| make a QR code of the job data to scan in. | 2 |  |  |
| set an integer member of work orders that's an ID of a dynamically created table of skids? | 2 |  |  |
| some kind of "partial skid" button for when you reset the counter and are going to only 550 instead of 1000, because you will want to make your next new skid the same smaller sheet count. Maybe a "sheets not on counter"? | 2 |  |  |
| add a setpoint for how long before the roll comes off you want the alarm. | 2 |  |  |
| exception if net/gross too high or low | 2 | 1 |  |
| gauge not persisting in go by height | 2 | 2 |  |
| add to floating toolbar DEBUG, a link to your repeaters. First: check if Google Word works better. | 2 | 2 |  |
| Get the product size button to display 21.87 x 17.39 correctly without ugly word wrap. | 2 | 2 |  |
| allow no speed now that you must have product to run. But then they won't know they need the speed. | 2 | 2 |  |
| Implement an interface for fragments that animate on wo change, and make a constant for how long it takes (rates s/b 500) | 2 | 2 |  |
| have skidfinished alarm send an "onstartup intent" to the LMB so it can hide the alarm button. | 2 | 2 |  |
| Have GetTimes start a ViewFlipper | 2 | 2 |  |
| * for rolls, go "distance to winder" and subtract some feet. | 2 | 2 |  |
| get rid of SpeedValues or at least make setDiff private. | 2 | 2 |  |
| find the exact location of "pick line" so the tutorial arrow can point there | 2 | 2 |  |
| put Enter Product on rates page | 2 | 2 |  |
| put second novatec on rates page (ubaldo) | 2 | 2 | not till release |
| check how MVC examples save and switch between records | 2 | 2 |  |
| animate transition after calc times | 2 | 2 |  |
| implement back button going to last Wo you were on. | 2 | 3 |  |
| Make a Takeoff Equipment with number of table skids | 2 | 3 |  |
| The other option to click a context menu item would be walking the view tree to find the action item view and then call click on it. | 2 | 3 |  |
| save/load alarm per work order? this allows being on "wrong one". Maybe always use earliest, or all, or pop up the line with the alarm or prompt. | 2 | 3 |  |
| when you change Wos, or pause, save what's entered in edittexts. In all fragments. | 2 | 3 | My actual user story: the user enters a new Wo, enters some data (eg sheet count), and doesn't have to hit GetTimes to save it when they switch back.  Or, the user enters some data in getRates, don't have to hit that to save it either.  This data is really the responsibility of the controller, which needs to not submit it to the model but keep it handy in an intermediate state till the user is ready. It knows what WO we're on, so it can save it itself. Could it monitor only the changed ones? Perhaps have an onChangedListener for all of them? It would be an onFocusChangeListener for instanceof EditText.  You already have this for getProduct, and that's the biggie. |
| test touchutils.tapview | 2 | 3 |  |
| reset time display when resetting alarm resets   * repeating timer update finish time by making new skid * repeating alarm should trigger with <90 seconds left, but just not go off immediately. Maybe set the trigger = one skid time + whatever's left on this skid. | 2 | 4 |  |
| Use [this](http://developer.android.com/training/efficient-downloads/regular_updates.html) to check for updates | 2 | 5 |  |
| Put work orders on back stack | 2 | 5 |  |
| flash red and wake phone for alarm, then turn off | 2 | 6 |  |
| switch wos in asynctask | 999 | ~~6~~  9 |  |
| = button next to total skids, gives a list of past & future finish times and weights. | 2 | 12 |  |
| change "calculate" name for positive button | 2.1 | 0.5 |  |
| make a function out of the gauge/1000 thing | 2.1 | 1 |  |
| Don't create the alarm if it's after 6am, and you are before EARLIEST\_REASONABLE\_START\_TIME (which is 5:50 for monitors, but 5:25 for techs : (  Notify with toast. | 2.1 | 2 |  |
| Add a spinner triangle to the line and wo buttons | 2.1 | 2 |  |
| make alarms go by the job – at least store their times with the job. Hook up cancel button to correct alarm. Put up dialog if not the page you're on | 2.1 | 10 |  |
| remove clearWos button in nondebug | 3 | .5 |  |
| entering 26.2 is weird in linear feet roll math, 26.19999 | 3 | 1 |  |
| Make roll math buttons clear focus from edittexts. | 3 | 1 |  |
| Pass around the diameter and stuff you enter in roll math using shared preferences | 3 | 1 |  |
| fact: ¾" screw gives pi-r^2 less concentrate. Could put this in Novatec class. | 3 | 1 |  |
| round minutes per skid and job finish time | 3 | 1 |  |
| slowly increasing vibration | 3 | 1 |  |
| Move "select a line" to where it is in the tutorial | 3 | 1 |  |
| install roboto italic? | 3 | 1 |  |
| remove decimal on L-6 line speed | 3 | 1 |  |
| try  Fragment f = viewPager.getAdapter().instantiateItem(viewpager, viewpager.getCurrentItem()); | 3 | 1 |  |
| rename function submitSpeedData | 3 | 1 |  |
| check if upgrading app retains repeating alarm setting | 3 | 1 |  |
| tip: vibrate put tape measure in pocket | 3 | 1 |  |
| Make core sizes its own database table | 3 | 2 |  |
| figure out why rates frag squishes floating toolbar when it has too much content and skidtimes doesn't. | 3 | 2 |  |
| skid up arrow can become de-blued. | 3 | 2 |  |
| make a single stroke on either side of the OR. | 3 | 2 |  |
| saturate primary buttons. | 3 | 2 |  |
| send Luis source code. | 3 | 2 |  |
| change mutually exclusive viewgroup to validate based on what's selected, not whether both have text in them. | 3 | 2 |  |
| when time is on next day display turns to 2 lines | 3 | 2 |  |
| consider making the tutorial so it runs again if you don't finish it | 3 | 2 |  |
| subtract targets per hour | 3 | 2 |  |
| what should Novatec setpoint belong to? It varies with the work order, not the line, but it's part of the line… or should there be some kind of hopper recipe object? | 3 | 2 |  |
| remove (do only if) clauses from calc times | 3 | 2 |  |
| have the model initialize the view by sending a propertychange(null, null, null) | 3 | 2 |  |
| prompt: "adjust speed factor so prediction will be 1 minute earlier" | 3 | 2 |  |
| *first: decide about populating menus from a model function.* populate your menus with a simple cursor adapter?  It is simple to use SimpleCursorAdapter. Just load your cursor, rows to display and the layout representing each row in the listView in the adapter (SimpleCursorAdapter(Context context, int layout, Cursor c, String[] from, int[] to)) and set the adapter of your listView to this SimpleCursorAdapter. | 3 | 2 |  |
| make a line break in the app name but not the activity name | 3 | 2 | You can have them different but it will load one and then snap to the other. |
| add padding parameters to the view returned by TipsActivityFragment.OnCreateView(). | 3 | 2 |  |
| fade in after tutorial? | 3 | 2 | <http://stackoverflow.com/questions/6796139/fade-in-fade-out-android-animation-in-java> |
| if line has shear option, like 9, make them choose | 3 | 3 |  |
| "Pounds done by 5 am" feature | 3 | 3 |  |
| set sheet or roll as background image on enter product button | 3 | 3 |  |
| optimize launchAppByName | 3 | 3 | Didn't even help when I launched straight from the package name. |
| put an image of "skid: 4 of 3.75" in your listview | 3 | 3 |  |
| Do <http://stackoverflow.com/a/4954800/733092> to merge your firstlaunch and main menus.  and/or merge in your code that keeps the settings option off the menu at first launch. | 3 | 3 |  |
| try [this](http://stackoverflow.com/a/12840673/733092) to put a layout in a listview | 3 | 3 |  |
| Persist go by height edittexts. So it can change with the WO. | 3 | 3 |  |
| set app\_name different from activity\_name | 3 | 3 |  |
| Make an onUpgrade for your openHelper that doesn't delete all data | 3 | 3 |  |
| add extra white to top of logo, make it big so you can use it as watermark – that's not functional though. | 3 | 3 |  |
| add icons and stuff to tips and apps screen | 3 | 3 |  |
| Fix skid cancel alarm so it displays based on status of broadcast receiver, not just whether it was showing | 3 | 3 | use  boolean alarmUp = (PendingIntent.getBroadcast(context, 0,  new Intent("com.my.package.MY\_UNIQUE\_ACTION"),  PendingIntent.FLAG\_NO\_CREATE) != null);  But, there's no point to this unless you actually reset the alarm with different work orders. Well, it would look good on new work orders. So I hid it when the skid finish time was not visible. |
| A help button that shows all the tooltips. | 3 | 4 |  |
| it seems like you should be able to delete random skids from the list, but that breaks mselectedskidposition if you delete a selected one. Right now removelastskid takes care of that. | 3 | 4 |  |
| test MockDialogInterface and mockContext, IsolatedContext | 3 | 4 |  |
| try a DELETE something FROM table WHERE id IN list. | 3 | 4 |  |
| debug destroy activity tests on emulator | 3 | 4 |  |
| do calculate times in multi-thread so gui doesn't hang? Or just a progress monitor | 3 | 5 |  |
| make dialogfragment embedded when sideways | 3 | 5 |  |
| try [ormlite](http://ormlite.com/) to save java objects – it seems like you don't need full DAOs for the simple stuff. | 3 | 6 |  |
| go thru code looking for old stuff to take out | 3 | 6 |  |
| database upgrade policy: should I delete the saved line and saved last tab? | 100 |  | nah, different issues. |
| disable go by height so you know it's there | 404 | 1 | 404 = not gonna do |
| Try to keep Ubaldo's screen looking the same. | 999 | xx |  |
| Turn on strict mode and watch | 999 |  | [StrictMode Tutorial](http://developer.android.com/reference/android/os/StrictMode.html) (in phone settings, developer settings). It flashes when you do too much (unintended) work on UI thread.  Overdraw: Phone settings, Developer Settings, Show GPU Overdraw.   | **Color** | **Meaning** | | --- | --- | | No color | No overdraw | | Blue | 1x overdraw, pixel was painted twice | | Green | 2x | | Light red | 3x, might indicate a problem, small red areas are still ok | | Dark red | 4x, pixel was pained 5 times or more, indicates a problem. | |
| remove/fix stfrag hiding code. Don't use mRootView.setVisibility(View.*GONE*); because of swiping etc. | 999 |  | I think |
| Enter Product button on rates page | 999 | ~~1~~  2 | x c&p code x tried to move to activity, but realized I need the fragment as the click listener to clear focus etc. |
| Put an "email the developer" link in settings | 999 | 1 |  |
| bigger touch target | 999 | ~~1~~  2 |  |
| Move the alarm button and make room for Ubaldo's phone  x alignment x turn red x finding vibrate icon LAST CHANCE | 999 | ~~1~~  3 |  |
| if (DEBUG) show seconds  x round seconds to nearest minute | 999 | 1 |  |
| highlight EnterProduct when none, or disable | 999 | 1 |  |
| gross width gets truncated x | 999 | 1 |  |
| fix bug 18 | 999 | 2 |  |
| Enter Product button display width and length so you can tell (and turn it gray?) | 999 | ~~3~~  4 | xx making it smaller xx and prettier |
| Profile GetTimes and select line | 999 | ~~3~~  4 | Responsiveness vs performance, which is problem?  you could turn the viewswitcher of finish times into a progress bar. Same with the original.  [Asynctask tutorial](http://developer.android.com/training/articles/perf-anr.html), or use a Thread that reports back toa  Handler. Readup on handler?  [Traceview tutorial](http://developer.android.com/tools/debugging/debugging-tracing.html) (in tools). ~~Deprecated, use Android Device Monitor (monitor.bat) instead.~~ Start the emulator, (phone seems to crash), DDMS, click your program, click 3 arrow button that says start profiling methods.  It gives you a peak diagram with white spaces where other threads were running or you were sleeping. Click and drag diagram to zoom.  Not too helpful.  For the flashlight launcher,  DispatchTouchEvent at 3027, binder launcher at 3624, spends 200 ms on Parcel.readInt, then 200 ms on java.tolowercase.  Sort by inclusive cpu time %, then click on it to see what's the highest %. TextView.makeNewLayout is 55.4% of 31%, but that's after, right?  The best is to put a android.os.Debug.stopMethodTracing(); call in (not sure if you need a start or can do with the DDMS).  [Systrace tutorial](http://developer.android.com/tools/help/systrace.html), requires Python. |
| animate the transition between lines | 999 | 3 | View.startAnimation(animation) |
| make skid times page fit ubaldo's screen  (scroll view with no scrollbar?) | 999 | 3 | x scroll view doesn't work because the toolbar isn't in the layout  x13 embedding toolbar as frag, trying to scroll times  x |
| 10-second letdown start at 40 | 999 | ~~4~~  9 |  |
| Reuse core type fragment | 999 | 11 |  |

|  |  |  |  |
| --- | --- | --- | --- |
| new major features | priority | poms |  |
| draining  Add numbers to database  (figure how much volume and density each has): 8 poms  Load and save hopper #s: 3 poms  later: Imagify hoppers (5 poms)  allow dragging mat'l to hopper (3 poms) | 1 | 60 |  |
| make a beta page | 2 | 1 |  |
| roll diameter calculator  code (2 poms)  unit test (5 poms)  interface (3 poms) | 2 | ~~10~~ |  |
| Jason Wee wants it to estimate what a skid should weigh, using  W x G x op factor x 12   * interface design (2 poms) * implement interface (4 poms) * model code (1 pom) * tests (2 poms) | 2 | 12 |  |
| letdown in lbs/hr:  g in 10 sec x 6 x 60 / 453.6  Additive % = lb/hr of letdown, / gross. | 2 | 12 |  |
| Ubaldo: tell you when you are going to run out of color | 2 | 16 |  |
| If two lines were running one WO, I could show a picker. | 3 | 10 |  |
| port to Edwin's iPhone, or run on Windows | 3 | 100 |  |
| calculate edge bolts | 3 | 12 |  |
| downstack button and secondary alarm (could cover moving corners)   * for stackdown, make a warning default at 2/3 | 3 | 14 |  |
| Go by roll diameter | 3 | 14 |  |
| Lost time.  Details:  finish time from last job:  start time for first skid:  first calculated finish time:  current calculated finish time:  lost time (startup):  lost time (running/saving):  total lost time:  Total save time for job: | 3 | 30 |  |
| an activity that lets you see the history of your skids – when done, total sheet count, etc. | 3 | 30 |  |
| A view to show all lines and Wos in order of when done, and alarms for the top one. So you can remove ones you don't care about. Or select which one you do. | 3 | 30 |  |
| save your edits when back button. | 100 | 4 | Not implementing:  If you don't want deleted, don't use back button! They are supposed to reflect the model exactly. |

|  |  |  |  |
| --- | --- | --- | --- |
| done | priority | poms |  |
| Email exceptions to developer   * catch all exceptions (2 pom) * send email (6 poms) | DONE | ~~10~~  6! | [submit crash reports options](http://stackoverflow.com/questions/601503/how-do-i-obtain-crash-data-from-my-android-application). Probably would use [Google EasyTracker](https://developers.google.com/analytics/devguides/collection/android/) but I don't want the Internet permission right now. Can track button uses, also. Try to get LogCat results.  xx using bugsense  xx getting bugsense to submit only online  x..x install crash button, attempt proguard, set time zone, write email |
| Tips and Apps screen  Motion Actions  Prox actions  flashlight  fractional skids, incl 3 of 2.5   * Menu item, list activity (3 poms)xxxx trouble… x * Create links to app store (3 poms)xx define map, do 2line text view * Actual text (2 poms)   x x open play store directly  x refactoring links so I can add tips above | DONE | 10  yes 10 |  |
| prompt you to pick line   * replace R.id.content (? 6)x trying to finish with no animation, x showing arrow only on first run * change background to pick line button (4?)x * make line able to be null and check for it (2)x * fix for smaller screen x * release x | DONE | 14  ~~9!~~ | start 13ish end 24 with release |
| clear work orders every Pace day   * make clear function work with no loops (3 poms) * do the timing (3 poms)x.5 | DONE | ~~8~~  2! |  |
| flashlight button  if no find, offer message and download link or hide button? \* find icon (1 pom)x fix other icon x   * alter code (3 pom)x * error message/link/hide button (2 pom) | DONE | ~~8~~  3! | Start: 9 |