

Here is a list of some of the new features, in no particular order:

- Preload
- Physically models how the nozzle extrudes (e.g. when you stop the extruder and the nozzle keeps on extruding / oozing)
- Is a function of the material properties, and the extruder hardware
- This is part of what what destring prime & retract were trying to solve
- This is very similar to the 'Advance' feature that some firmware is testing (though with path planning, instead of just reacting to G-code)
- Initial preload values can be computed from material properties, or from a quick experimental procedure
- The Preload value can then be tuned with the Tuning Wizard
- Tuning Wizard
- changes a selected parameter as a function of Z
- Can change PreloadVE, Destring length, extrusion temperature, flow rate, or just tune a custom Token
- New settings storage
- one file per profile
- easier sharing and version control
- Fractional number of loops
- improves bonding between loops and infill
- e.g. 3.5 will alternate between 3 and 4 loops to average 3.5
- Stepover Control (adapts layer thicknesses)
- Is enabled when the max layer thickness is larger than the regular layer thickness
- will try to exactly match the Z of flat surfaces
- will vary the layer thicknesses so that the desired stepover (XY offset from one layer's perimeter to the next) is achieved
- has independent stepover targets for lower (to not need support) and upper (primarily for looks) surfaces
- can have multiple distinct object, each will be sliced with its own optimum layer thicknesses
- Reference Settings
- can quickly reload a key set of profiles from a separate location)
- Preliminary Project files
- saves and loads all the settings used in a slice
- Can load settings back in from previously saved G-code
- loaded Project profiles are temporary and will not clutter up your own profiles
- New 'Cellular' infill style
- often called '3D infill' (how is that different? [8^])
- Especially useful for TPU prints to give a more even compression
- weaker vertical bond on certain layers, so only recommended for materials with excellent inter-layer adhesion (TPU, PET-G, etc.)
- Join-Loop setting
- new seam-hiding technique
- used in conjunction with Seam Gap and Depth (I like Gap=0,Depth=1, others reverse that)
- Support Interface
- Can now specify the exact angle, width, and stride of the interface layer
- Can independently set the 1st layer's extrusion width
- Raft can now have specific "interface layers" added on top
- Bond option duplicates the exact paths from the 1st layer to improve adhesion
- Brim Latch
- useful in conjunction with a raft
- captures the brim by extending some raft material over the outer top of the brim
- Object Packer
- Many improvements (and bugs fixed) in the packer
- Correctly reports when the parts do not fit on the bed
- Can specify which corner to place the Prime Pillar (if used)
- Parts can now nest (fit inside one another's bounding box)
- Internal Path Optimizations
- unsupported path portions are detected, and can be slowed to improve quality
- The path simplifier is more accurate
- KISSlicer can avoid outputting too-short segments (that firmware would drop anyway)
- exact Z-step placement (make the layer heights match the hardware)
- KISSlicer tracks the streamed path-node-per-second info, and will slow down a path if it would have caused a buffer under-run
- G-code Improvements
- There is now a preheat function (saves time when using more than one extruder)
- Pause-and-Resume G-code can be triggered either at the top of Void sub-objects, or at specific user-entered Z heights
- New G-code Tokens for box temperature, prime pillar position, and the tuning value, and custom named and defined tokens per material
- Material improvements
- can specify how much each material with shrink in X&Y, and separately in Z
- 'Cool' flow rate will be triggered on unsupported paths
- Box (enclosure) temperature specification
- Preheat can be disabled per material for ones that would drool on heating

- User can add notes per material to track info specific to that material
- Miscellaneous
- The settings panel now hovers in its own window (press the [S] button at the bottom right to re-open)
- Selected profiles are summarized in the top left of the 3D window
- used RAM is displayed in the top right of the 3D window
- Perspective View can be disabled (ISO view)
- Previous layer can be displayed
- 3D paths can be previewed (with width and height)
- You can quick-orient the view along the X or Y axes
- Corporations can restrict advanced settings from most users
- There is a ScaleX/Y/Z right-click feature for uneven scaling
- the Force-Path-Angle right-click feature can specify the path angle for material testers (not recommended unless you know exactly why you would want to do this)
- Many new command line options