Better toolpaths make better ~~parts~~ product

Rob Lockwood

Prototype Engineer/MakeOfAllTheThings@Oculus

ABOUT..

- ON INSTAGRAM @LOCKEDTOOL @ROB_AWESOME_LOCKWOOD
- EVERY ONCE IN AWHILE I MAKE KNIVES
- AND ENTER THE #FUSIONCAMCHALLENGE

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- PROTOTYPING ENGINEER AT FACEBOOK WORKING ON OCULUS VR'S PRODUCT DESIGN GROUP
- PRIMARILY ITERATION ON THIN-WALLED INJECTION MOLDED COMPONENTS
- WE USE EVERY TECHNOLOGY AVAILABLE TO PROTOTYPE AS FAST AS POSSIBLE

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iFixit


IDEA
THING

EXPLORE ▸ PROTOTYPE ▸ BUILD

PROVE OUT CONCEPTS

FIGURE OUT WHAT THE PRODUCT SHOULD BE

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ITERATE UNTIL IT'S PERFECT

AVOID COMMITMENTS IF THEY WILL CAUSE FRICTION

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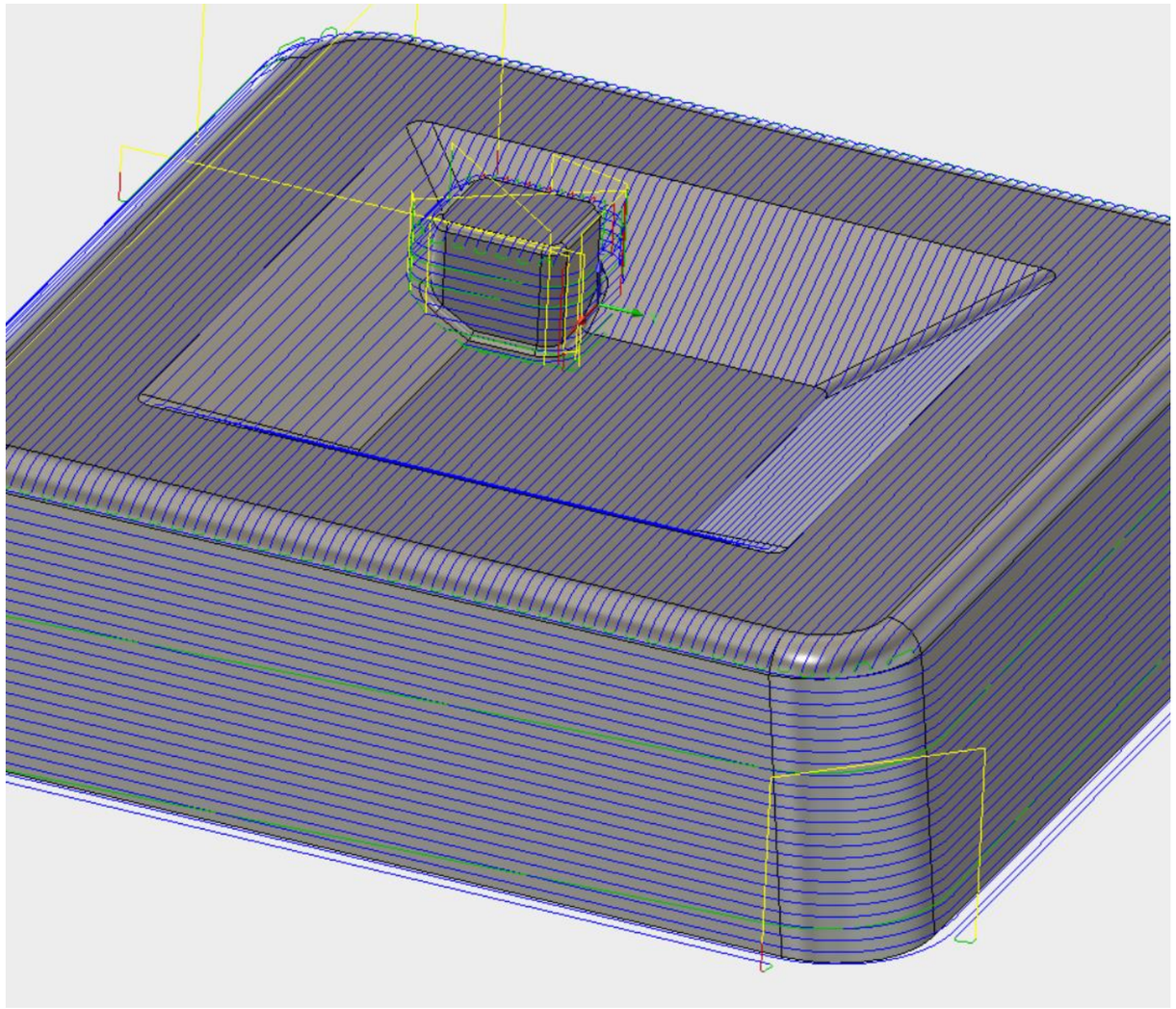
REFINE THE PROCESS

MAKE IT MORE EFFICIENT & RELIABLE

EVALUATING TOOLPATHS

- FOUR MAIN CRITERIA
  - REQUIRED INPUTS (LESS IS MORE)
  - SCALLOP CONTROL
  - QUALITY (SMOOTH)
  - CURVATURE



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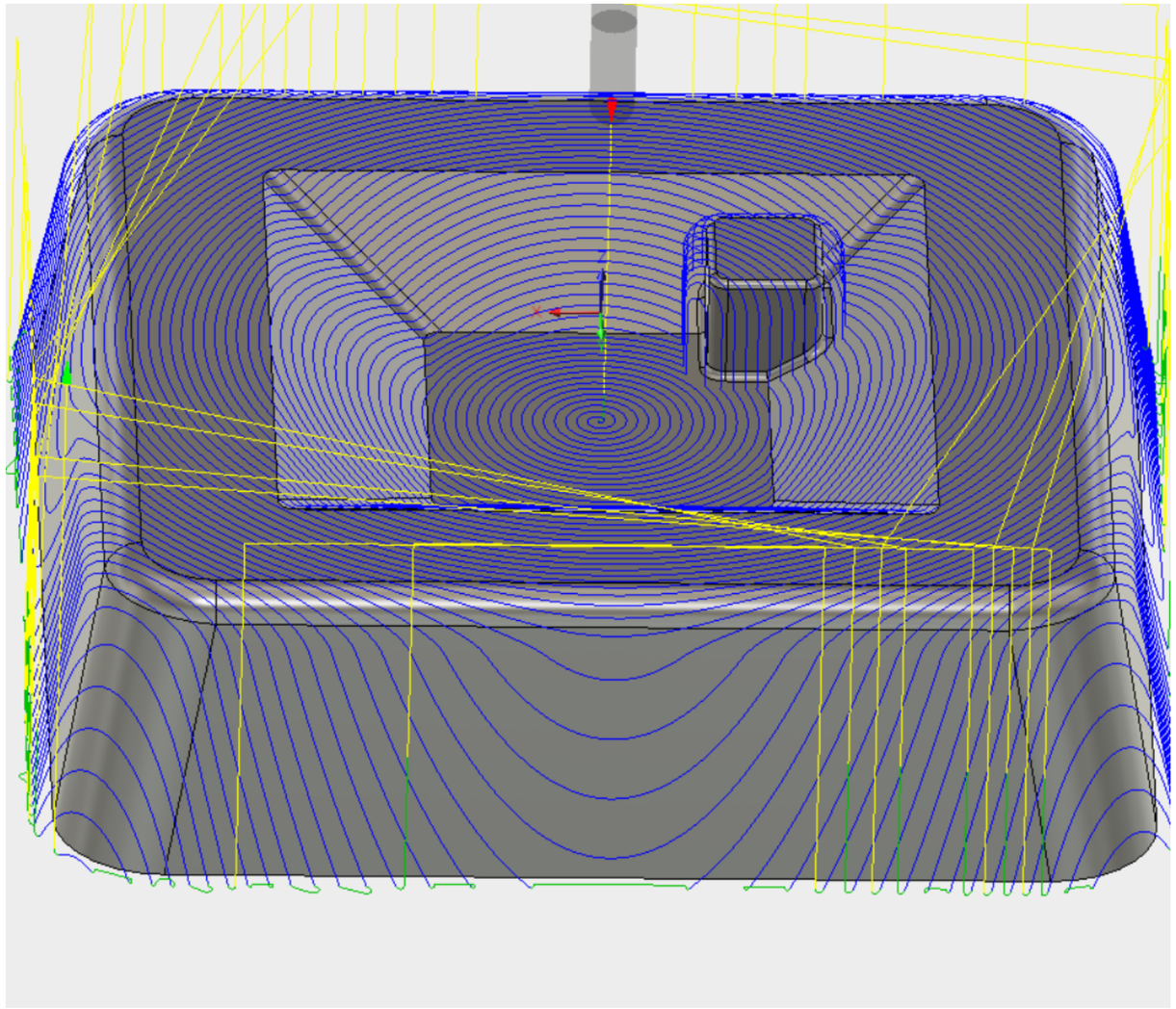

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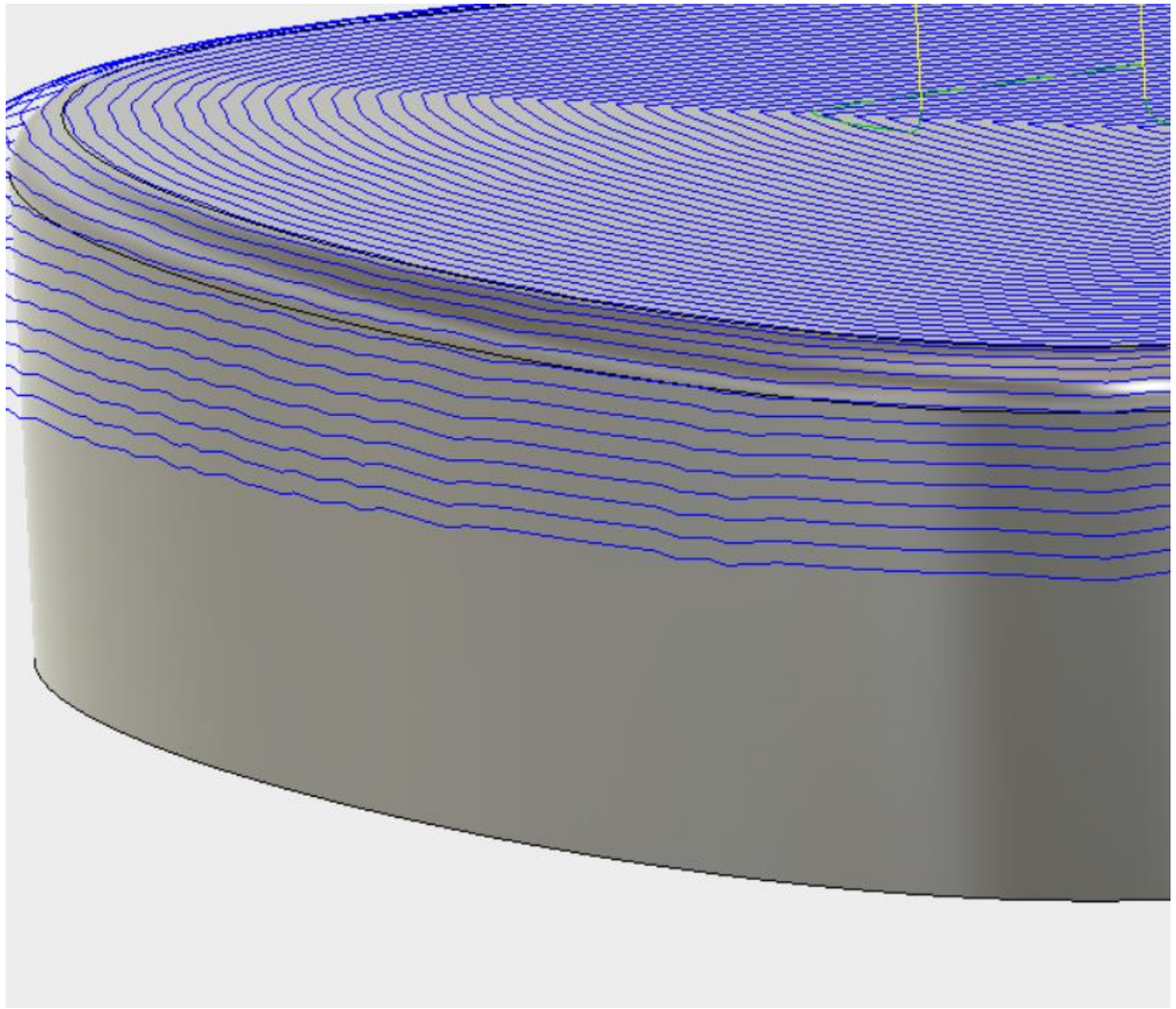

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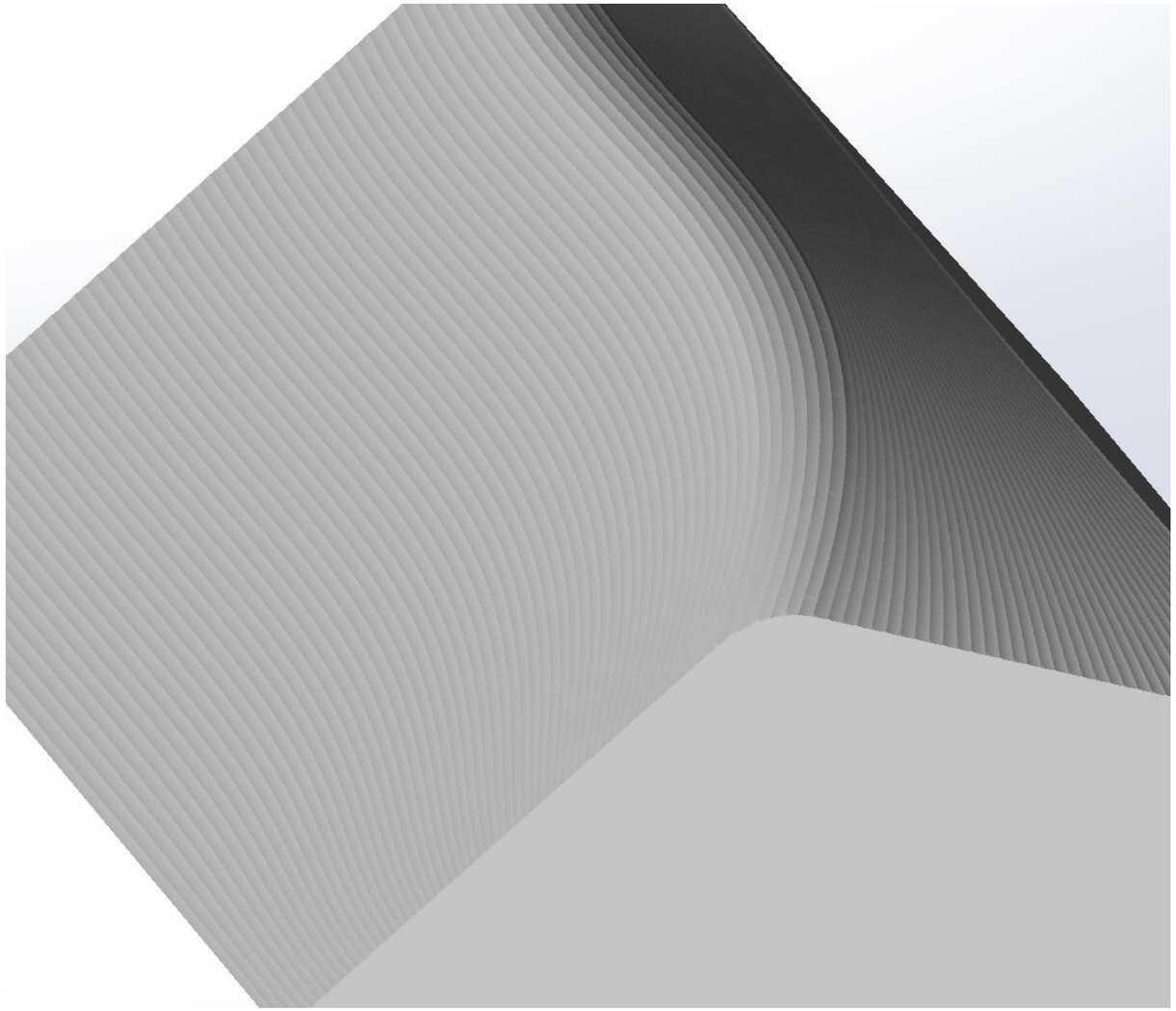

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SURFACING TOOLPATH APPLICATIONS

FAST

PARALLEL
CONTOUR
RAMP
PENCIL

SITUATIONAL

PROJECT
RADIAL
SPIRAL
MORPH SPIRAL
TRACE

ADVANCED

MORPH
BLEND
FLOW

SCALLOP

AUTODESK®

Make anything.