Release 5.3

- New weight functions solutions (crack at hole, stress distribution in C-direction for part through cracks)

- Using different material data as a function of spectrum

- Applying different material data to the different crack directions

- Ability to Replicate Results From Previous Versions (back to Version 5.01)

- Option to Save Input File With Retardation State Data for Later Restart

- Undo-Redo

- New solution for a corner crack at the countersink knuckle

- MSD

Additional Requests

- 64 bit version

- User rights management for the input/output files

- 2-D weight functions

- Convert material data from the AFMAT to useable format in AFGROW

New weight functions solutions

- Added 3 new solutions
  - Corner cracks with stress distribution along C direction
  - Single through edge crack with symmetry condition at the crack edge
  - Single through edge crack with symmetry condition at the edge away from the crack
- Status: Finished coding the solutions, coding verification is done, testing solutions accuracy and applicability
- To do: finish testing the accuracy and applicability of the solutions
- AFGROW GUI modifications

New solution for a corner crack at the countersink knuckle

- Based on Jody Cronenberger master thesis

- Tension loading only

- Solution Space:

  - D/T – 0.3 to 2.6;

  - Cd (Countersunk Depth)/T - 0.001 to 0.99 (0.15),

  - C/T - 0.0125(D/T) +0.002 to 2.5(D/T)

  - A/C/T – 0.5 to 4

- Status: Finished coding the solution implementation

- To do: Understand the solution boundaries and do verification runs, add COM API support, finish GUI integration

Status of Release 5.3

- New weight functions solutions (crack at hole, stress distribution in C-direction for part through cracks) **- 80%**

- Using different material data as a function of spectrum – **0%**

- Applying different material data to the different crack directions **- 10%**

- Ability to Replicate Results From Previous Versions (back to Version 5.01) – **20%**

- Option to Save Input File With Retardation State Data for Later Restart – **25%**

- Undo-Redo – **0%**

- New solution for a corner crack at the countersink knuckle – **50%**

- MSD – **0%**