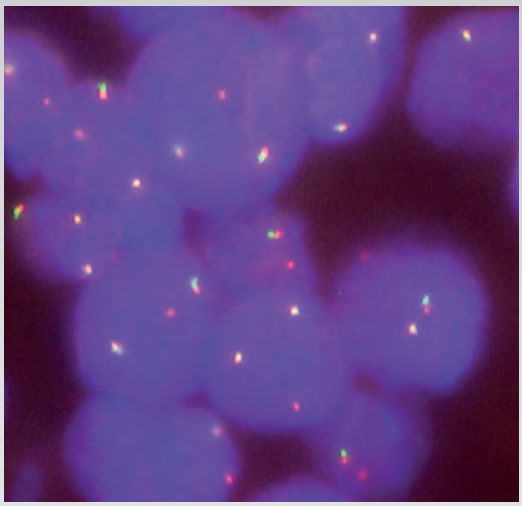
The human factor in determining FISH biomarkers

TIRED?

Tired of tedious FISH counting in the dark room?

Help is in sight! **AutoMaX** ***promises to ease the pain by automated FISH analyses.***

Interested to learn more?



What is AutoMax?

- **AutoMax** is completely novel system for automated FISH counting
- It is not related to other existing systems and its technology was developed newly from scratch
- **AutoMax** is a proprietary system of bioMcom, a German SME specializing on bio-math and bio-stats for biomarkers from molecular pathology

What you will **not** get from **AutoMax**:

- **AutoMax** is not a one-fit-all system, but will be adapted to your specific technology configuration
- **AutoMax** is not interactive but supports your work in a batch-wise processing (more about further down)

Historical remark:

After a couple of experiences with image analysis in a completely different area, bioMcon hired a specialist in mathematical image analysis for tackling the FISH analysis problem. Many experts at this time said that this amounts to a mission-impossible task. Still the team of bioMcon ventured this project, based on long-standing experience with molecular pathology biomarkers. With the aid of renowned pathology companies and a university pathology, the program matured over the years to its present stage.

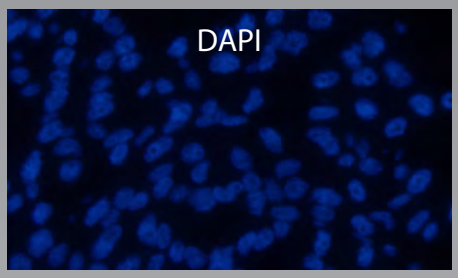
CHALLENGE TAKEN BY AutoMax

- Systems for computerized reading of FISH images usually require high quality multi-stack images for valid processing.
- For the clinical routine this may lead to an actual slower process than performed by the common manual processing.
- **AutoMax** takes the challenge to base the automatic analysis on a much lower quality standard.
- **AutoMax** bases the analysis on regular single-stack images as they arise by routine in the lab documentation.
- **AutoMax** fits to the standard workflow of molecular pathology.

The high sensitivity to reliably recognizing also weak signals is the backbone of the AutoMax system. Dr. Schildhaus, Professor of Pathology at the University of Göttingen (Germany) notes:
„It is amazing how AutoMax can detect also very weak signals, which are hardly discernible by the human observer." This strength of AutoMax allows for analyzing images with lower quality.

INPUT to AutoMax

Single-stack photo shots of hotspots in TIF format. Separate matched RG-Filter images and DAPI-Filter images, maybe multiple as necessary.

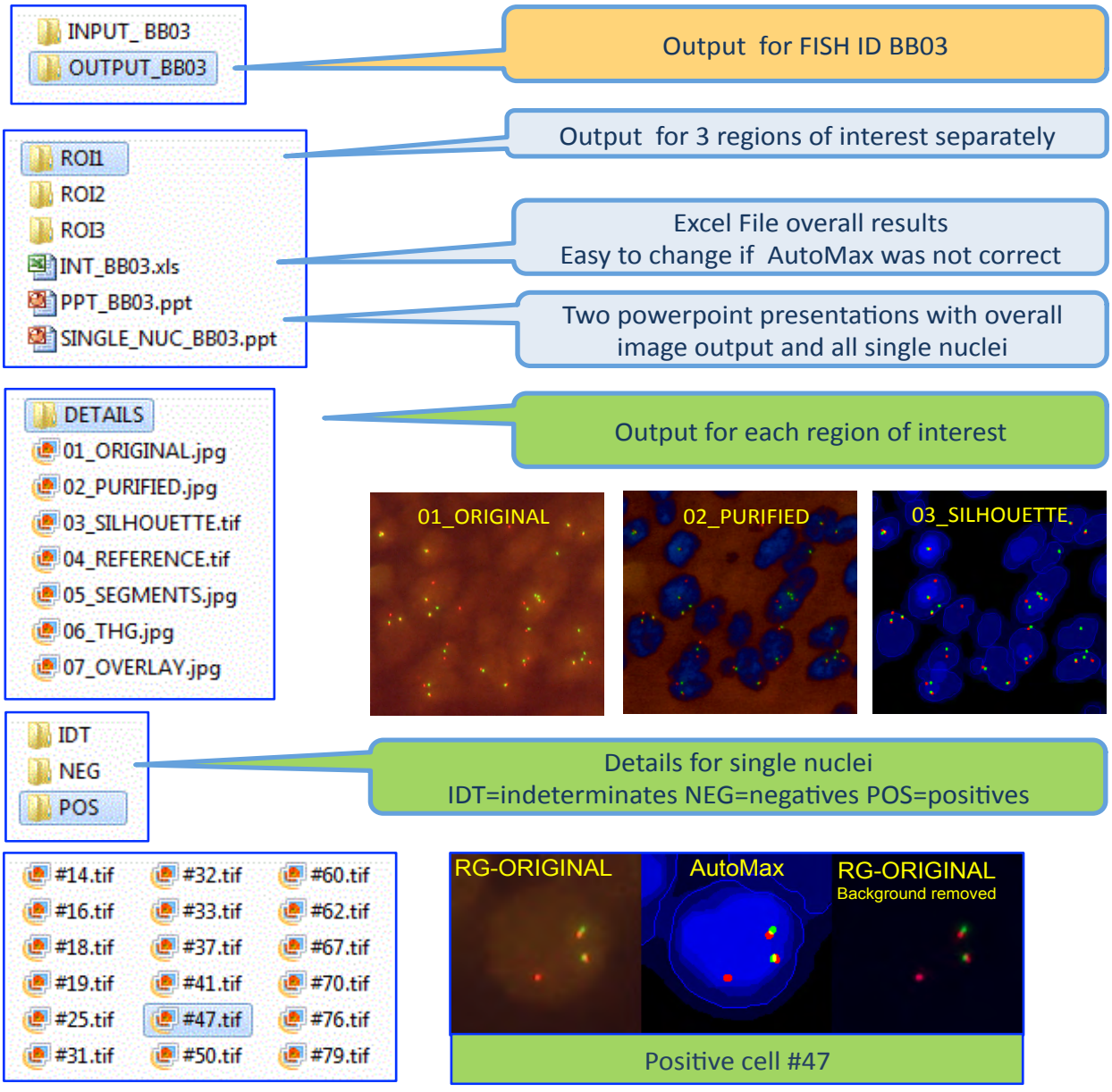


OUTPUT AutoMax

(needs to be in keeping with the following practical requirements)

- Easy access to the **AutoMax** overall result
- Allow for easy revision of the **AutoMax** assessment when necessary
- Auxiliary image material for assessing difficult cases
- Supports electronic documentation

AutoMax OUTPUT Structure



AutoMax

AutoMax represents the serious attempt to revolutionize the FISH-analysis for molecular pathology biomarkers. All ingredients from mathematical image analysis, artifact recognition, and self-learning are developed and ready for a practical try. Professor Schildhaus notes: ***„I think that, if developed in the right way, AutoMax can make a significant contribution to reduce the necessary time for FISH analysis while improving at the same time standardization and validity".***

Interested in a try?

- **You send us some examples of images that you want to automatically analyze**
- **We calibrate the program to deal with images done with your technology**

If you are content with the result we may start a project...

Phase 1: Interactive customizing of ***AutoMax*** towards your wishes (output format, file specifications, etc)

Phase 2: You receive an user access to the ***AutoMax*** online analysis portal

Phase 3: The practical work can start:

(a) Upload of images to an order manager

(b) receive a note next day, with a link where you may download the results

AutoMax brings you back into the light!

***AutoMax* by**

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