

if ...
for knits
than
before?

minutes
design
knit

DELHI 16:25 DHAKA 16:55

STOLL

H. STOLL AG & Co. KG
Stollweg 1
72760 Reutlingen
Germany

Phone: +49 7121 313 - 0
Fax: +49 7121 313 - 110

contact@stoll.com
www.stoll.com

DITF - Deutsche Institute für
Textil- und Faserforschung
Körschtalstraße 26
73770 Denkendorf
Germany

Phone: +49 711 93 40 - 0
Fax: +49 711 93 40 - 297

virtual.knit@ditf.de
www.ditf.de

COLLABORATION DITF - STOLL | WWW.STOLL.COM

STOLL

Safety & Protection Industrial Smart Textiles Healthcare
Automotive Sport Home
Machine Technology Product requirements Product design Material Technical standards

STOLL
Innovative technical textile solutions.

TT indu TT home TT med TT sport TT mobility TT protect TT e-tex

DITF
DEUTSCHE INSTITUTE FÜR
TEXTIL+FASERFORSCHUNG

STOLL

What
prototyping
is faster
ever

18
algorithm
program

COLLABORATION STOLL AND DITF

The **DITF** (*German Institute for Textile and Fiber Research*) as the largest European textile research center and the **H. STOLL AG & Co. KG** as the world-renowned flat knitting machine manufacturer present a fully automated production and development process out of a digitalized 3D CAD model.

The combination of STOLL 3D flat knitting technology, the STOLL knitelligence® software package and the DITF automatization tool for processing 3D CAD models to 2D knitting data will influence future product development and production processes.

The DITF is renowned for its research competence and pioneering role for industry 4.0 in the textile supply chain. STOLL provides state of the art 3D knitting technology and services for designers, product developers and textile manufacturers.

Together, the DITF and STOLL create fully automated and digital integrated process solutions as a milestone for the textile and flat knitting industry 4.0.

STOLL knitelligence® TOOLS



M1plus® – pattern software for the creation of knitting programs.



STOLL-artwork® – knitting support in Adobe® Photoshop® for better communication between designers and technicians.



STOLL-autocreate® – automation tool for creating knitting programs without manual intervention.

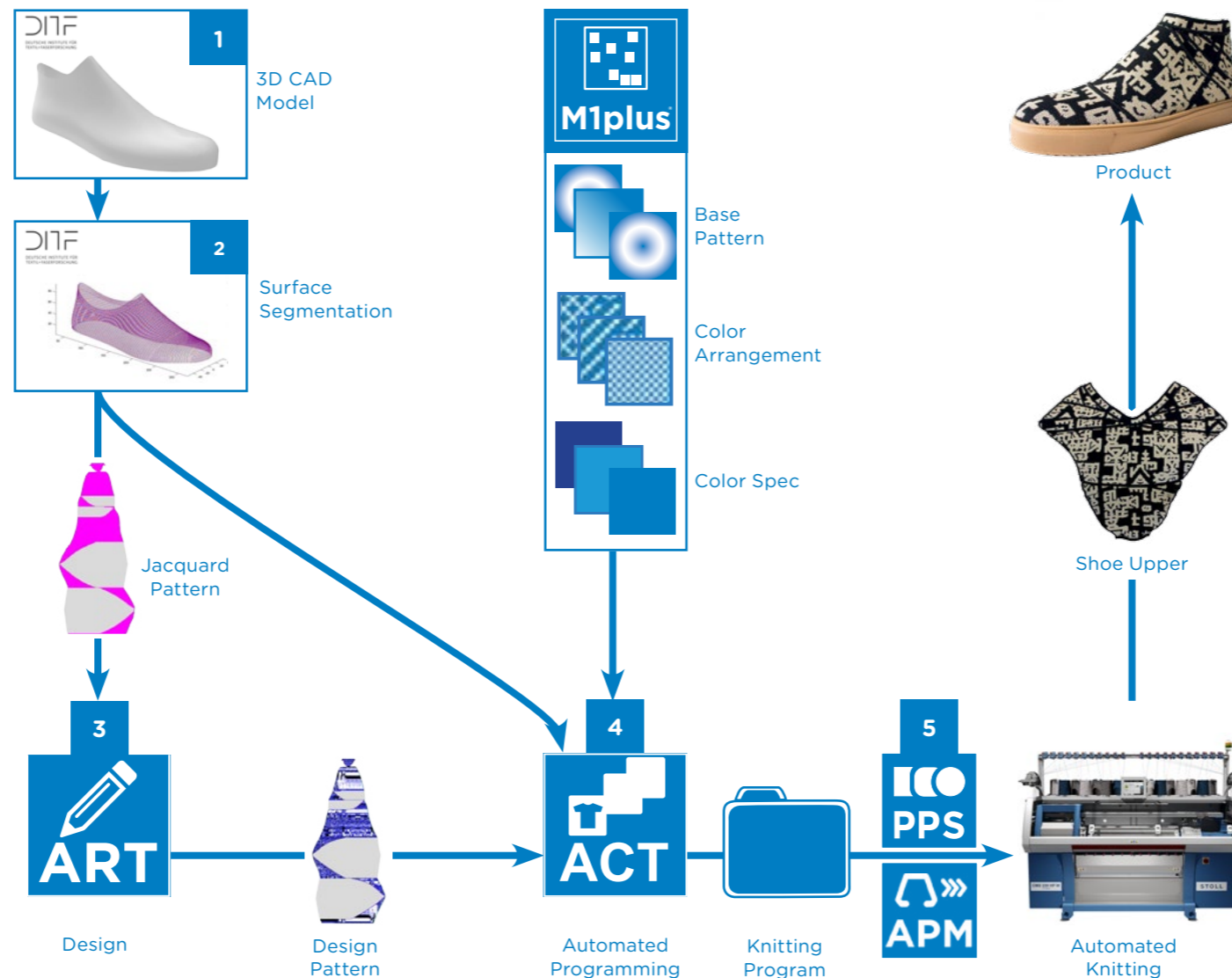


PPS (Production Planning System) – software tool for production planning and machine management.



APM (Auto Production Mode) – tool for an automated knitting process after receiving knitting orders via the customer network.

AUTOMATED 3D KNITTING TOOL KIT DEVELOPMENT AND PRODUCTION BY STOLL knitelligence®



PROCESS DESCRIPTION AUTOMATED KNITTING

Digital shoe last illustration

- 1 • CAD-file from physical model, CAD model
• Integration of loop parameters and specific knitting operations

Digital computation - 3D to 2D

- 2 • Segmentation according geometric requirements
• Output: M1plus® and STOLL-artwork® compliant knitting file (jacquard)

Design integration with STOLL-artwork®

- 3 • Knitting file/bitmap as a design base
• Automated consideration of knitting requirements (measurements, colours, machine)

Automated knitting program creation

- 4 • Input: designed pattern of STOLL-artwork®; prepared M1plus® files
• Output: knitting program for automated order distribution with PPS

Automated order distribution and production

- 5 • Prioritized and capacity related dispatching of knitting orders (PPS)
• Automated production by the Auto Production Mode (APM)