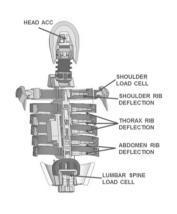
IAT - Engineering Services for Automotive Safety

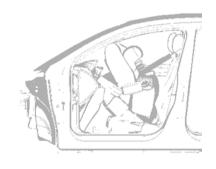


IAT supports customer development programs providing experience, expert knowledge & development tools for automotive safety applications









Research

Concept

Pre Development

Development

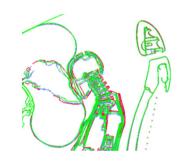
Solution Research
Parameter Studies
Advanced Methods

Concept Definition Concept Studies Proof of Concept System and Component Specification

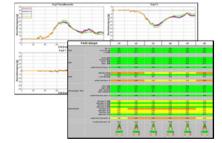
System and Component Validation

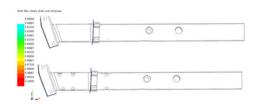
Portrait





- IAT is an expert in occupant safety
- IAT has more than 20 years of experience in automotive saftey
- IAT is one of the biggest service providers for occupant crash simulation
- IAT supplementary to numerical simulation provides sub-system and component testing and design and build of specific test equipment
- IAT develops software for planning, conduction and evaluation of safety tests
- IAT products and services are applied world-wide
- OEMs trust in IAT for more than 20 years
- In cooperation partnership with TU Berlin, IAT has access to latest research and technology kowledge, facilities and a pool of junior engineers
- IAT employs 65 colleagues with an annual turnover of 4 Mio. Euro





IAT Milestones



1991	Foundation of IAT Ingenieurgesellschaft für Automobiltechnik mbH	2004	Partnership mit PDB pdb - Partnership for Dummy Technology and Biomechanics
	Start as Spin-Off of TU Berlin to conduct full scale vehicle crash tests	2006	Opening office Munich (Karlsfeld)
1994	Start Development, Design and build of Testing devices Barriers, Rubberband-Crash facilities,	2009	Opening office Stuttgart (Brackenheim)
1997	Velocity measurement devices Start Softwaredevelopment for	2011	Start Meshingservice & stuctural analysis
	Testplanning and evaluation EVA, ISOVERTER,	2012	DIN EN ISO 9001-2008 - Quality Management System
1997	Start Numerical Simulation Occupant crash simulation (Madymo, PamCrash)	2013	ISO/IEC 27001-2005 – Information Security Management System
2002	Formation of the subsidiary	2013	Start IAT-Vietnam
	IAT Dynamics Marketing "RMOD-K" tire-model	2014	

Scope of Services



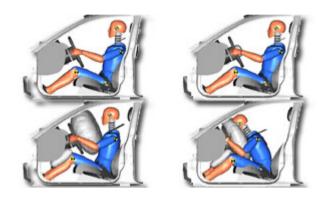


Next to standardized Services, IAT provides customer specific solutions

- Specialized Test Rigs
- Modification of Test facilities
- Software Development
- CAE Process Tools
- New Methods
- DOE / Optimization

Scope of Services – Numerical Simulation





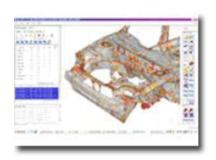


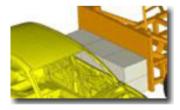
- IAT Services Occupant Crash Simulation
 - Occupant Simulation from Concept to development with state of the art tools PAM-SAFE®, ABAQUS®, LS-DYNA®
 - Systemdesign/-optimization based on DOE and statistical Methods
 - Generation of validated models for tier 1 components in front and side impact (airbag, IP, steering wheel, steering column, seat,...)
 - Creation of validated models for child restraint systems
 - Out of Position-Simulation
 - Development, evaluation and modification of dummy models

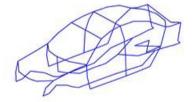
Scope of Services – Numerical Simulation



















IAT Services Structural Analysis

- Linear static computation
- Linear dynamic computation
- Nonlinear computation (explicit, implicit)
- Rotordynamics
- Durability and Endurance strength
- Stiffness, natural frequencies and –forms
- Optimization (Topology, thickness)
- Preprocessing with Hypermesh® and ANSA®
- Tires (RMOD-K)

Scope of Services – Meshing

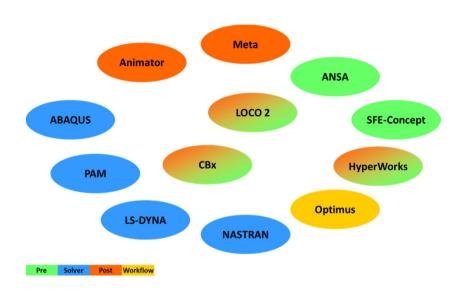




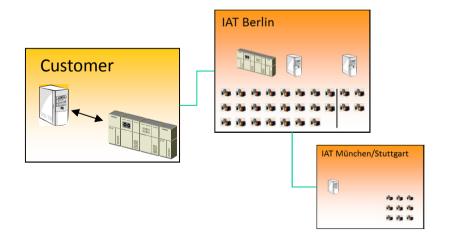
- IAT Services Meshing
- Our service includes mesh generation as well as the creation of "ready to compute" input decks. Models of complex assemblies will be delivered free of penetrations and intersections, connections are also included.
- Altair Hypermesh® or ANSA® are used for meshing. Further software can be installed as required. A secured server is available for data exchange.
- User-to-user-connections are installed to various customers. Encoded data exchange can be handled with the existing infrastructure.

Scope of Services – Numerical Simulation





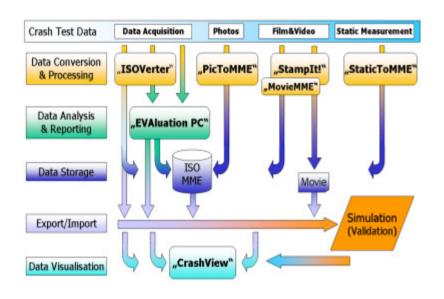
- IAT Software Installations
- Pre-/ Post-Processing
 - ANSA, HYPERWORKS, SFE-Concept, LOCO 2, CBx, Primer, ANIMATOR, META
- Solver
 - ABAQUS, LS-DYNA, PAM CRASH, NASTRAN



- IAT Hardware Resources
 - ▶ 64 CPUs
- 100Mbit 1Gbit data connections to customers

Scope of Services – Software





IAT Softwaredevelopment

We are developing software products for standardized and automated evaluation of testing data, utilizing the advantages of ISO MME (ISO 13499)

IAT products enable you to...

- Planning of test and resources
- Transfer measurement data to valid ISO formats
- Analyse measurement data
- Automated creation of reports
- File movies and pictures in accordance with MME

We adjust our products to your needs











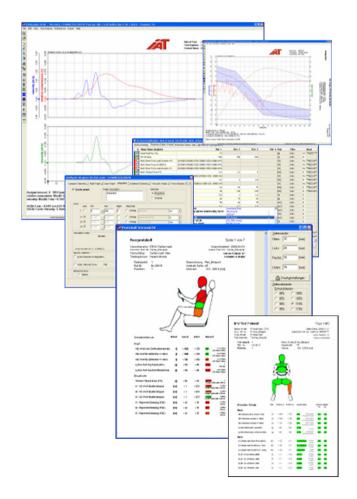


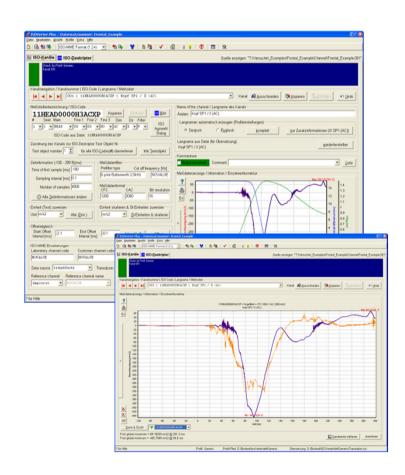


Scope of Services – Software



EVAluation NCAP / ISOVerter Turn-key solution for crash testing

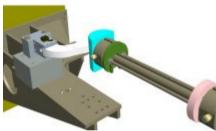




Scope of Services – Testing











IAT Services Testing

- Standardized test rigs
- Customer specific test rigs
- Sled and component testing
- Drop tower tests
- Pendulum tests
- Tests with fast hydraulic cylinders
 - in cooperation with external partners
- Validation tests
- Tests according to customer definition



Scope of Services – Test Rigs











Test rigs and components according to customer requirements

- IAT Services Design and Build of test Rigs:
- Testing facilities / Test rigs
 - Sled test facilities (e.g. ECE R16, ECE R44)
 - Low speed test facilities
 - Customer specific test devices (e.g. door-test system, static and dynamic B-pillar test rig,...)
 - Drop towers
- Testing equipment
 - Sleds, Bases and Trolleys
 - Barriers (AZT, EuroNCAP, Side Impact)
 - Barrier sleds (ECE, FMVSS 214, IIHS)
 - Euro NCAP "Flying Floor"
 - Angle adjustment for sled systems
 - Brake systems / emergency brake systems
 - Measurement systems for Dummy-Positioning
 - Dummy joints "1g-Joint"

Project Topics CAE



- Occupant protection for automated driving
- Human Model during PreCrash phase
- Ideal Restraint System
- Adaptive Crash structures



- System design side impact occupant protection
- System design back-seat passenger protection
- System design for child protection
- Car body design to meet Small Overlap
- Struktural design B-pillar in side crashes
- Design of door trim
- Evaluation and modification seat structures
- Modelling of steering columns
- Modelling / Design of child restraint systems
- Optimization of CAE processes







Customers

















Customers







Römer



































Britax







Certificates



Quality Management ISO 9001



ZERTIFIKAT

DIN EN ISO 9001

Die qmcert UG bescheinigt hiermit, dass das Unternehmen

IAT

Ingenieurgesellschaft für Automobiltechnik mbH

Gustav-Meyer-Allee 25

D-13355 Berlin

mit dem Geltungsbereich:

Erbringung von Ingenieursdienstleistungen in der Automobiltechnik zur Konzeption, Konstruktion und Fertigung von Komponenten und Versuchsanlage, Auswertung von Sicherheitsversuchen

ein Qualitätsmanagementsystem entsprechend der Norm DIN EN ISO 9001:2008 eingeführt hat und wirksam anwendet. Der Nachweis wurde im Rahmen des Audits mit der Bericht Nr. 12-9839311810 erbracht. Die Zertifizierung bzw. das Zertifikat hat eine Gültigkeit von 3 Jahren.

 Zertifizierungs-Nr.:
 03-6712011112

 Ausstellungsdatum:
 20.03.2012

19.03.2015

F. South

Gültig bis:





qmoert UG (haftungsbeschränkt) – Postfach 23 43 – D-72713 Reutlingen - www.qmoert.cr

Information Security Management ISO 27001





für das Informationssicherheits-Managementsystem nach ISO/IEC 27001:2005

Die regelwerkskonforme Anwendung wurde nachgewiesen und wird gemäß Zertifizierungsverfahren bescheinigt für das Unternehmen



IAT Ingenieurgesellschaft für Automobiltechnik mbH Gustav-Meyer-Allee 25 13355 Berlin

Geltungsbereich

Technische Berechnung, Softwareentwicklung, Konstruktion und Produktion innerhalb der IAT mit dem Standort Berlin

Unter Berücksichtigung der aktuellen Erklärung zur Anwendbarkeit

Zertifikat-Registrier-Nr.: TIC 15 121 13018

Gültig bis: 2016-08-18 Gültig ab: 2013-08-19

Audit Bericht Nr.: 3330 2MER A0

Diese Zertifizierung wurde gemäß TIC-Verfahren zur Auditierung und Zertifizierung durchgeführt und wird regelmäßig überwacht.





Jena, 2013-08-19



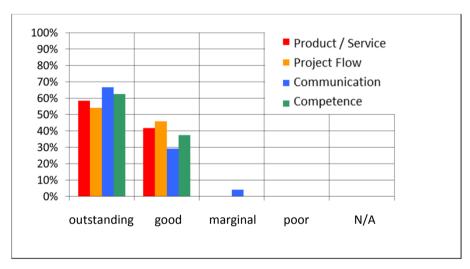


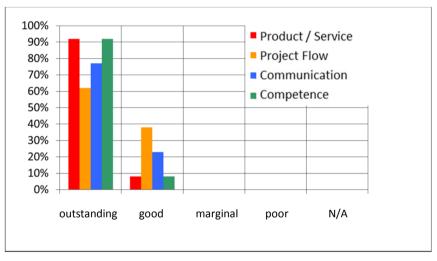
Die aktuelle Gültigkeit kann unter www.tuev-thueringen.de nachgetragt werden.

Zertifizierungsstelle des TÜV Thüringen e.V. ≈ Ernst-Ruska-Ring 6 « D-07745 Jens » 😭 +49 3641 399740 « zertifizierung@tuev-thueringen.d

Customer Satisfaction







no

Survey 2012

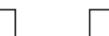
Survey 2013

Would you recommend IAT to others?



yes

maybe maybe not



n/a

100% of our partners do recommend IAT

Contact



IAT

Ingenieurgesellschaft für Automobiltechnik mbH

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13355 Berlin
Deutschland / Germany

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Visit our Website: http://www.iatmbh.com

IAT Customers World Wide



