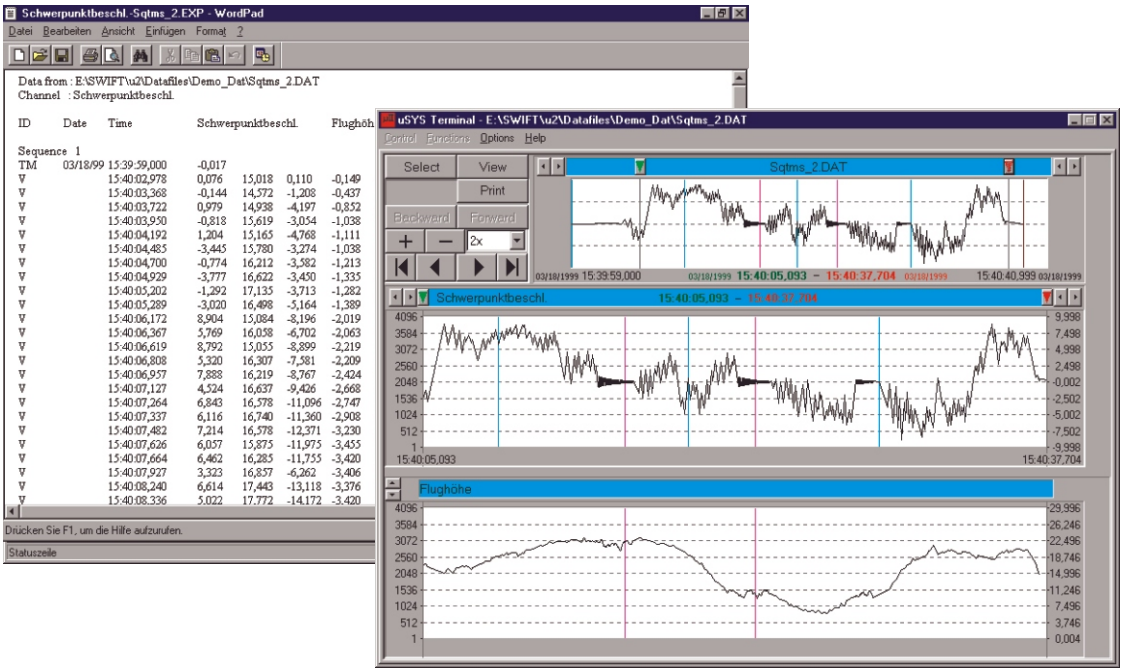
Evaluation Method

SQTMS

Sequentiel Peaks and Troughs with Time and Master/Slave concept



Description of the Evaluation Method

With the method SQTMS the turning points of defined master channels are sequentially taken with time and stored. Additionally the simultaneous values of slave channels which are assigned to this master channel are taken (time correlated to the turning points). Any channel can be defined as master and any other as slave to the master channel. Each master channel can have up to 8 slave channels. Altogether more than 100 slave channels can be defined.

A helpful feature is the marker function which can be used to mark special events in the data stream. The programmable amplitude suppression ensures that small signal variations are filtered out.

Typical Applications and Features

For fatigue life analyses, the stored data are reduced to the essential characteristics of the signal-time function, and the required storage capacity is cut down dramatically (compared to transient mode recording). This also effects the handling of the measurement data which can be easily archived and displayed in a compact manner.

SQTMS is best choice for all mid term measurement campaigns where several fatigue relevant signals should be recorded in a time related way.

Please turn over for graphical presentation of SQTMS results.

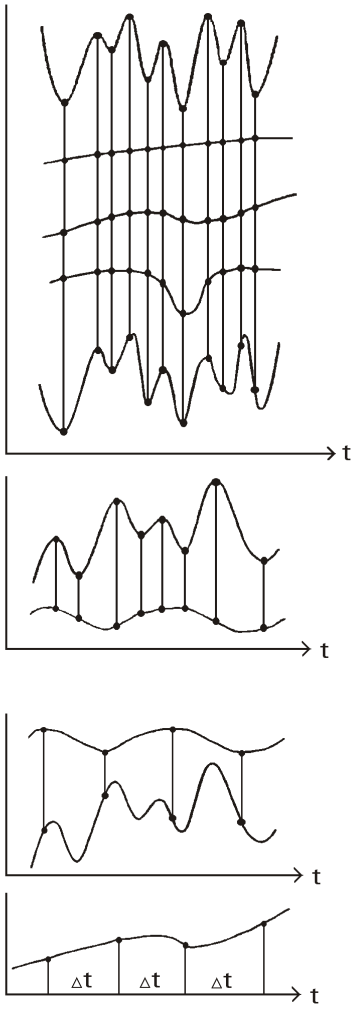
SQTMS

Evaluation Method

Example for the presentation of a registration of measured data with Sequential Peaks and Troughs with Time and Master/Slave concept:

This example is taken from a centre of gravity measurements on an aircraft structure, where the distribution of wing bending along the span of the wing is depending of e.g. acceleration and altitude as well as velocity of the aircraft.

Master	C. G. Acceleration	g
Slave	Altitude	m
Slave	Velocity	v
Slave	Angle of roll	φ
Slave	Bending moment wing	kNm
Master	Bending moment horizontal	kNm
Slave	Bending moment vertical	
Master	Bending moment vertical	kNm
Slave	Bending moment horizontal	
Transient	Differential pressure	Δ p



Subject to technical alterations
(Rev. 1.0_080605)

SWIFT GmbH is certified for aviation systems

Gesellschaft für Messwerterfassungs-Systeme mbH

Am Dieburger Berg 18 D-64354 Reinheim
Tel. +49 (0) 6162 - 82 0 86 info@swift-online.de
Fax +49 (0) 6162 - 82 6 04 www.swift-online.de