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Forschung für den Leistungssport

IASI 2011 International Workshop

The development of (collaborative and push) services for coaches and scientists – challenges and peculiarities in elite sport

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Department Information Communication Sport
Institute for Applied Training Science Leipzig (Germany)


Our
world
is full of
new ideas

The iceberg effect

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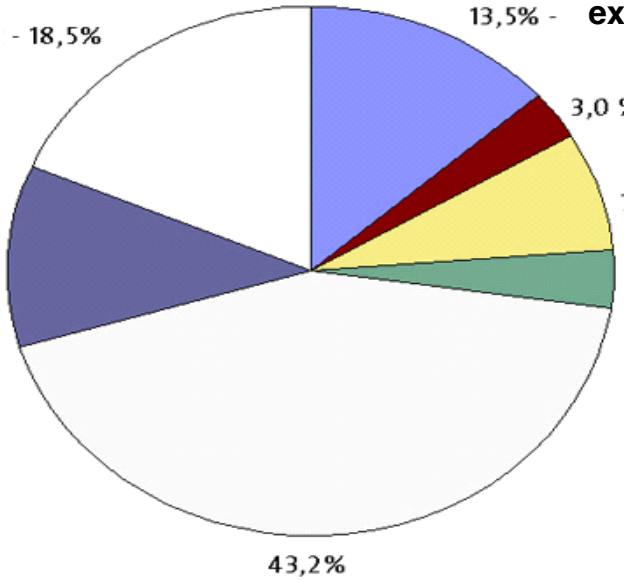
How do the ordinary tasks/work loads in elite coaching look like today?



travel, trips

exchange of information

acquisition of information, processing of information

production of information

delivery

organisation / administration

training / competition

only 3 % for information retrieval and acquisition and 13,5 % for information exchange

Source: Muckenhaupt (2008). Information supply for coaches

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recent situation in elite sport

time budget for retrieval, supply and processing of quality information, latest findings and knowledge

request for in-time „quick“ answers

request for sustaining answers

confidential communication

peer-to-peer instead of public communication

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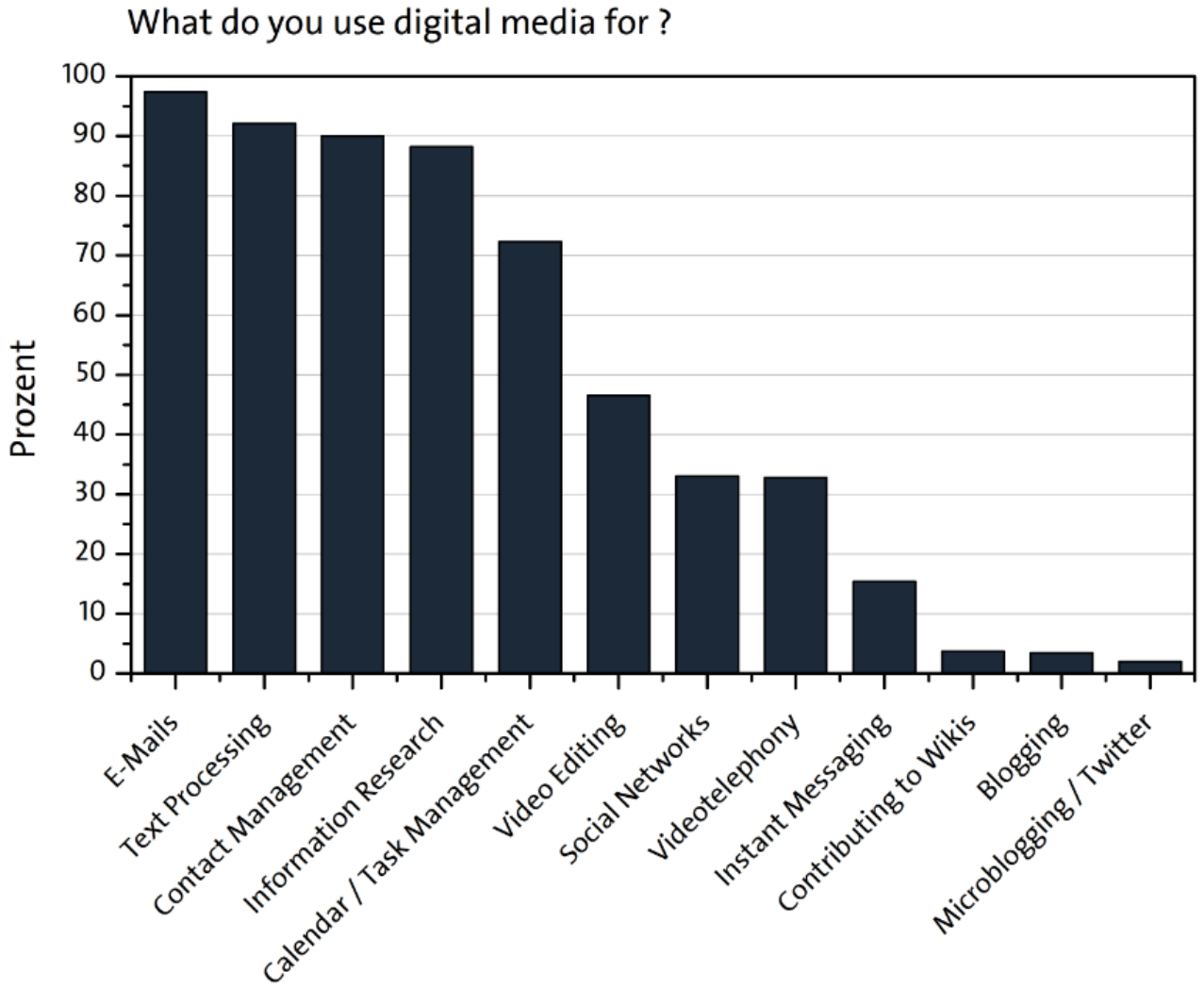
What about modern communication media for coaches?



Source: Muckenhaupt et al. (2011): Knowledge management in the scientific network

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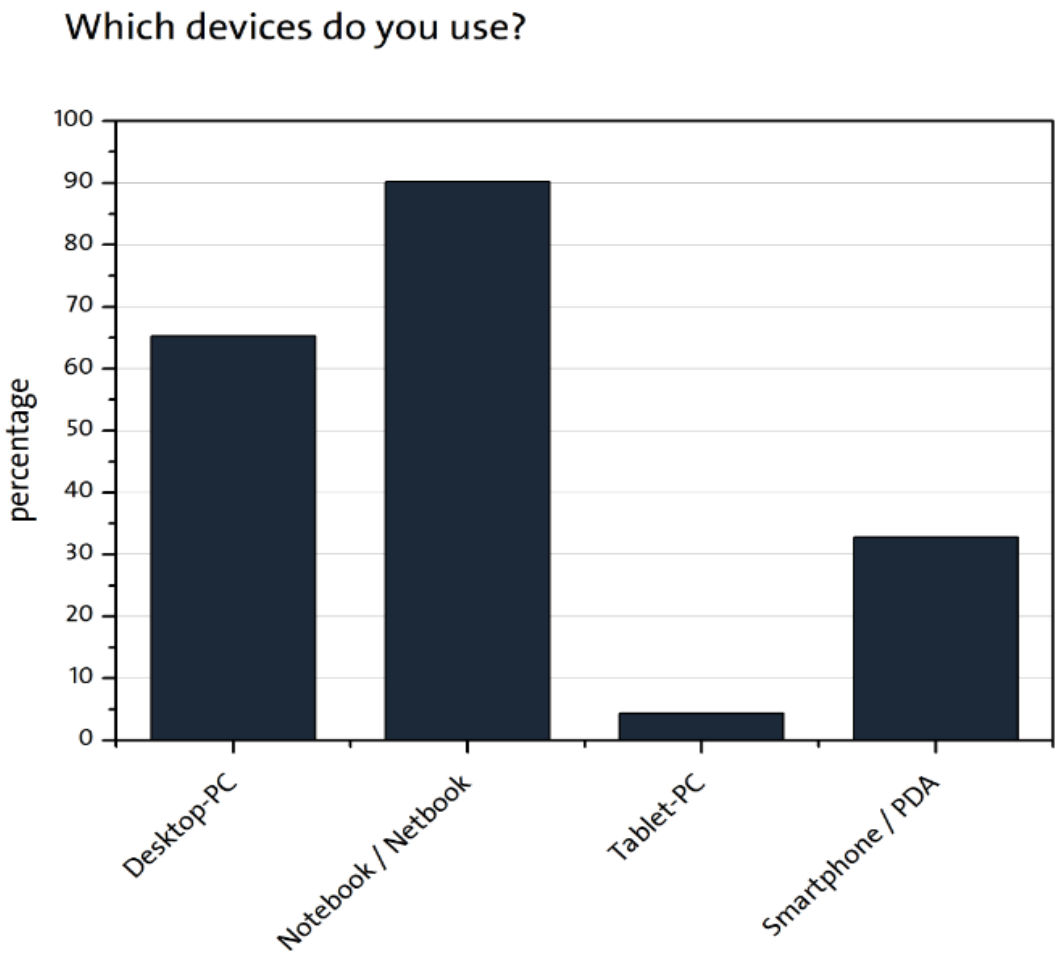
What devices do coaches use for communication?



Source: Muckenhaupt et al. (2011): Knowledge management in the scientific network

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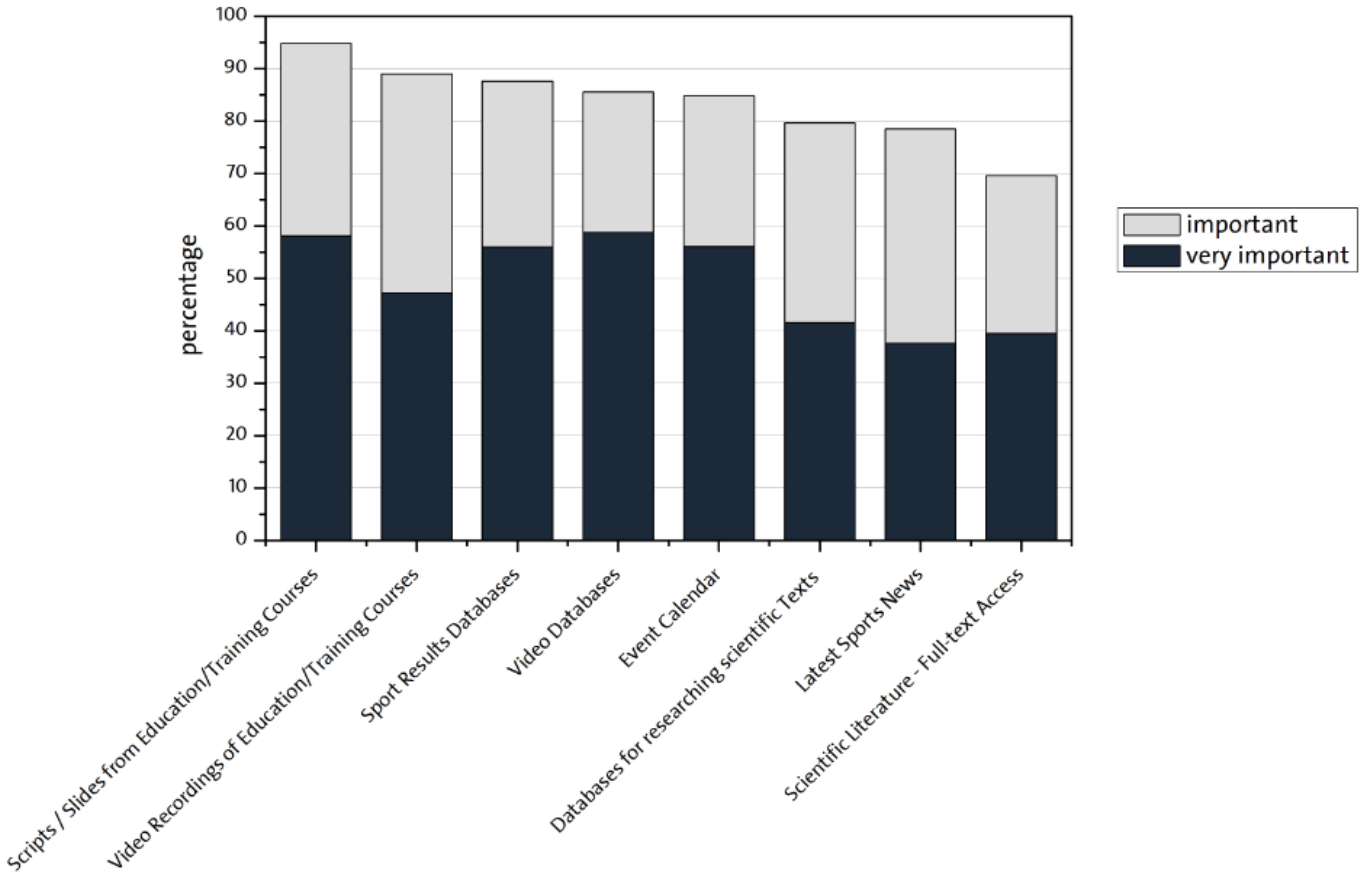
Importance of content and functions of an Internet based communication platform in elite sport

How important do you rate the following types of content in an information system for Elite Sport?

(respondents who think that internet services should be expanded)



Source: Muckenhaupt et al. (2011): Knowledge management in the scientific network

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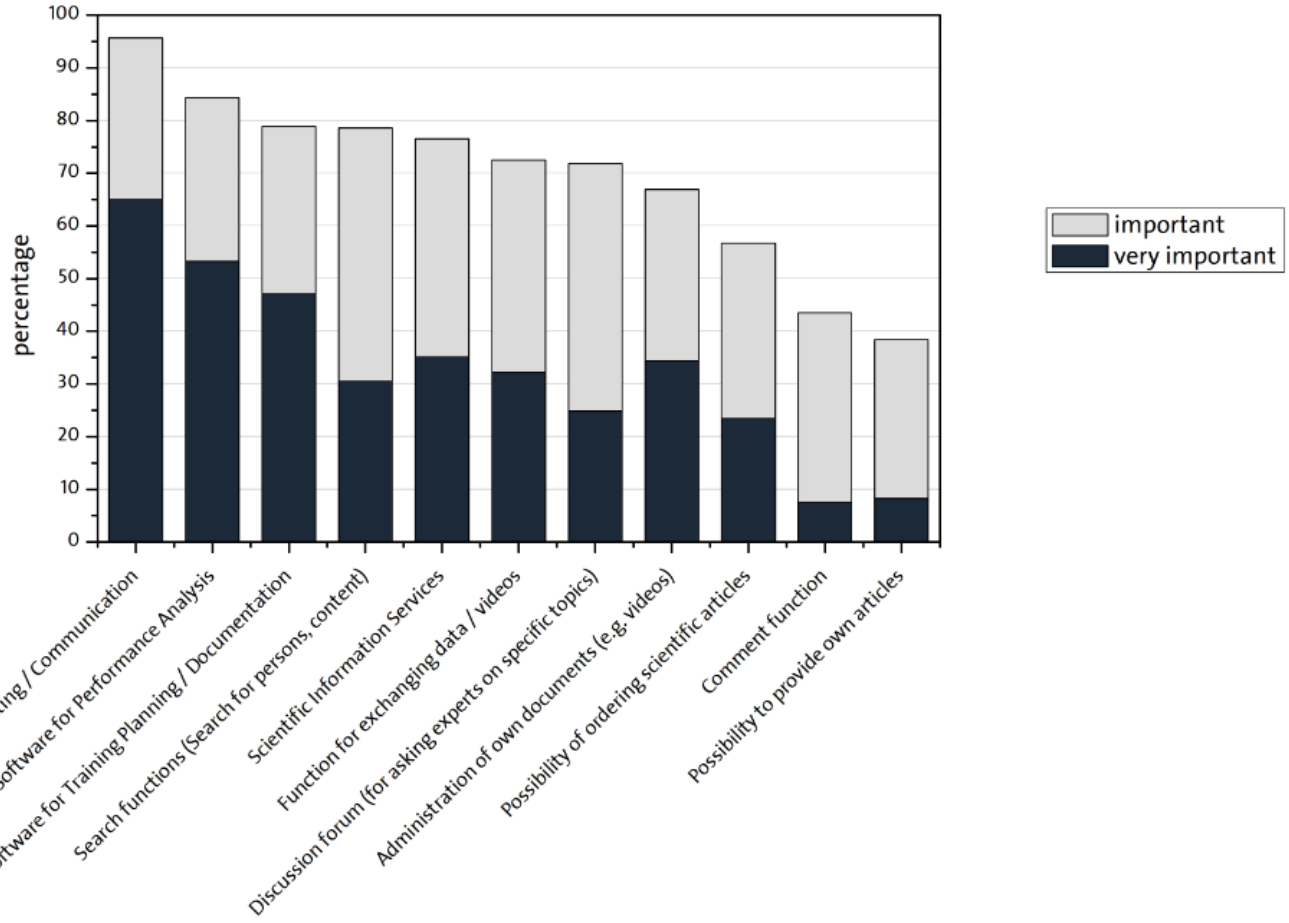
Importance of content and functions of an Internet based communication platform in elite sport

How important do you rate the following functions an information system for Elite Sport can provide?

(respondents who think that internet services should be expanded)



Source: Muckenhaupt et al. (2011): Knowledge management in the scientific network

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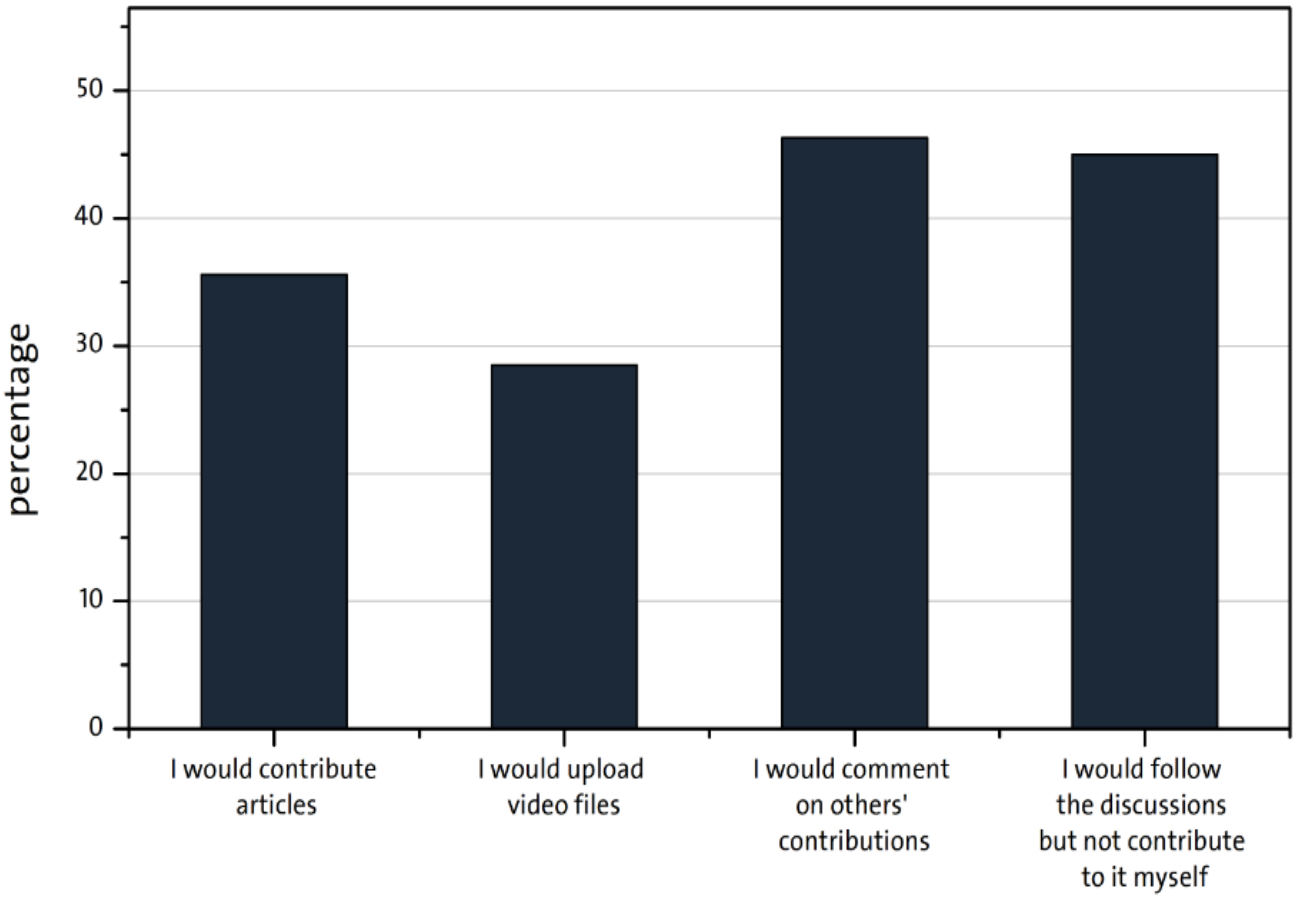
Active participation vs. passive consumption? !

How would you participate in information exchange processes in an information system?

(Multiple answers possible)



Source: Muckenhaupt et al. (2011): Knowledge management in the scientific network

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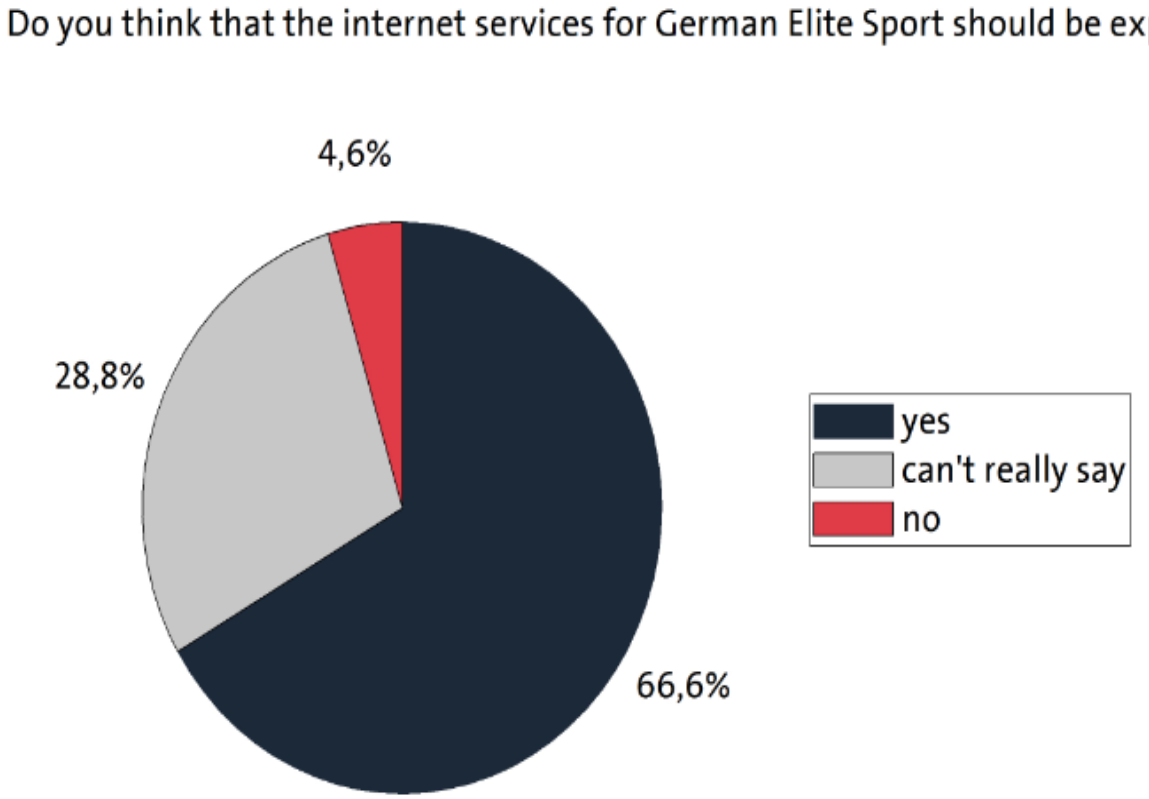
What services do elite coaches request?



Source: Muckenhaupt et al. (2011): Knowledge management in the scientific network

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What basic approaches are possible to meet the expectations of the coaches?

Solutions resp. developments for individual tasks and options

Own developments or use of external resp. commercial services, e. g.
- develop a database for scientific literature
- develop a video database
- co-operation with a university library for document delivery
- applying Skype or a similar system for video conferencing

Focus on solutions resp. developments for selected tasks and options and connecting them with several web 2.0 functions

Own developments or use of external resp. commercial services, e. g.
- develop a database for scientific literature + external upload tool + document delivery + communication tools for scientific literature
- develop a video database + external upload tool + a tool for commenting and communicating on the videos + access control

Focus on a platform and networking approach resp. solution with a complex service offer which can be individualized according to the needs and which has all relevant 2.0 functions

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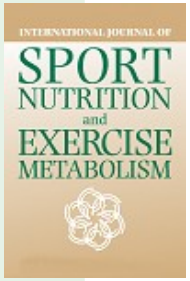
specialized database with focus on training and training science



MEYER &MEYER VERLAG

conference proceedings

Blackwell Synergy

ADT

electronic thesis world-wide

more than 150 journals

Google

new books of more than 250 publishing houses

hofmann. VERLAG

philippka SPORTVERLAG

International topical databases

PubMed www.pubmed.gov
A service of the National Library of Medicine and the National Institutes of Health

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content of the SPONET database

- Actual information (288)
- Professional training/research (308)
- Endurance sports (5522)
- Sports for handicapped people (122)
- Biological sciences/sports medicine (9022)
- Combat sports (743)
- Strength- and power sports (1453)
- Management (335)
- Junior (elite) sports (1337)
- Natural science and technology (2392)
- Organisations an events (767)
- P.E. at schools (38)
- Social sciences (1132)
- Game sports (3129)
- Sport history and sport politics (415)
- Technical sports (1217)
- Training Science (4583)

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active information supply and distribution

Von: IAT-Suchagent [siv@iat.uni-leipzig.de] Gesendet: Mi 15.12.2010 05:03
An: sandner@iat.uni-leipzig.de
Cc:
Betreff: SPRINT: 8 Neuerfassungen in den IAT-Datenbanken
Anlagen: ATT00094.txt (93 B)

sprint

Fachinformationsdienst des Fachbereichs Information Kommunikation Sport des IAT

Hallo Dr. Hartmut Sandner,

Ihr personalisierter Suchagent für die Neuerfassungen in den IAT-Literaturdatenbanken hat folgende Ergebnisse für Sie:

- 1 Treffer für Profil komplett / SPORTBOX (täglich)
- 7 Treffer für Profil SPONET komplett / SPONET5 (täglich)

IAT Institut für Angewandte Trainingswissenschaft

- **Profil 'SPONET komplett' - Datenbank SPONET5**

1. Jaitner, T., Janssen, D. & Burger, R., Wenzel, U. (2010). **Identification of EMG-frequency patterns in running by wavelet analysis and support vector machines (Identifikation von EMG-Frequenzmustern beim Laufen durch Wavelet-Analyse und Vektormaschinen-Unterstützung)**. In Proceedings of the XXVIII International Conference on Biomechanics in Sports. (S. 376-380). Zugriff am 13.12.2010 unter http://w4.ub.uni-konstanz.de/cpa/article/view/4474/4163

   The purpose of this study was to identify EMG pattern of running at different speed and incline based on a trial-to-trial analysis. Eight subjects performed treadmill running at five different conditions (4, 5 and 6 m/s, 5m/s at 5° incline, 5m/s at 2° decline). EMG data of eight leg muscles were recorded and transformed by a wavelet analysis (van Tscharner, 2000). Ten subsequent steps of each subject and condition were classified by support vector machines. Between 93 and 100% of all EMG patterns were assigned correctly to the individual. According to the different running conditions recognition rates ranged between 78 and 88%. Hence, support vector machines can be considered as powerful nonlinear tool for the classification of dynamic EMG patterns. (Mikrofiche-Nummer: 21209)

2. Sheerin, K., Whatman, C., Hume, P. & Croft, J. (2010). **Reliability of 3d frontal plane knee ab/adduction range of motion during running in young athletes (Die Reliabilität des Bewegungsumfangs der Knie Ab- und Adduktion in der 3D Frontalebene bei jungen Läufern)**. In Proceedings of the XXVIII International Conference on Biomechanics in Sports. (S. 368-371). Zugriff am 13.12.2010 unter http://w4.ub.uni-konstanz.de/cpa/article/view/4472/4161

   This study quantified within-session and between-session reliability of 3D frontal plane knee ab/adduction range of motion during the stance phase of running gait calculated for 18 long term athlete development programme participants (10 males and 8 females, 11.5 ±1.4 years) during two testing sessions (spaced 10 weeks apart). Average mean differences in frontal plane knee ab/adduction between running trials (for the right or left side) within a session (week 1 or week 10) ranged from 0.2 to 7.2% (ES 0.01-0.26) which were acceptable differences. However, average mean differences between sessions for running trials (for the right or left side) ranged from 0.1 to 20% (ES 0.01-0.6). The mixed model resulted in estimates of knee ab/adduction range of motion for effects of limb side (3.6°), session (2.8°), run trial (0.2°) and subjects (4.5°). Within-session ICCs ranged from 0.80 to 0.92 and between-session ICCs ranged from 0.51 to 0.73. Based on these ICCs, within-session reliability of frontal plane knee ab/adduction is good and between-session reliability is average to good. (Mikrofiche-Nummer: 21210)

3. Bonacci, J., Green, D., Saunders, P., Blanch, P., Franettovich, M., Chapman, A. & Vicenzino, B. (2010). **Change in footstrike position is**

library catalogues

SPONET

SPOWIS

Heracles

SPORT DISCUS

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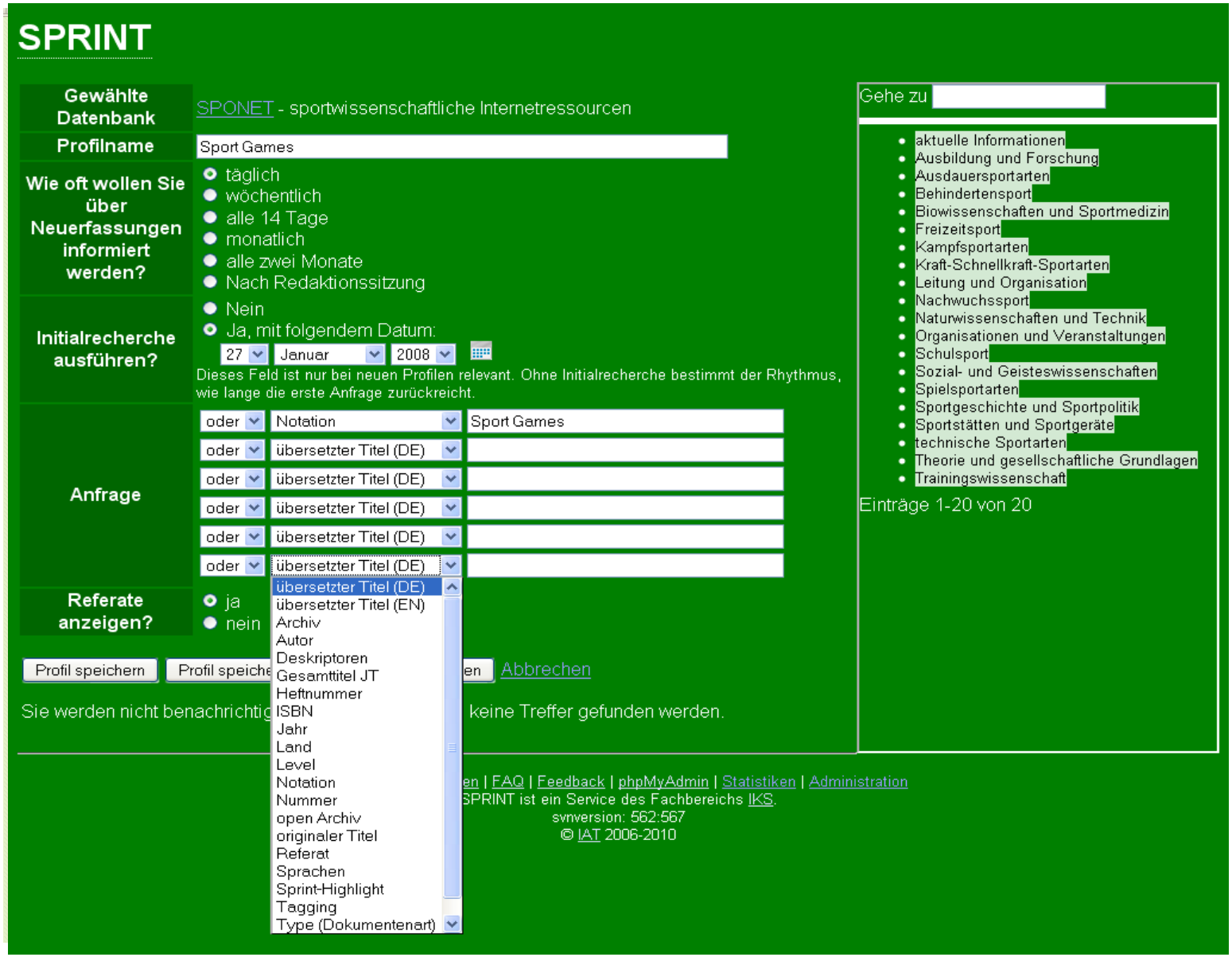
individualized information supply



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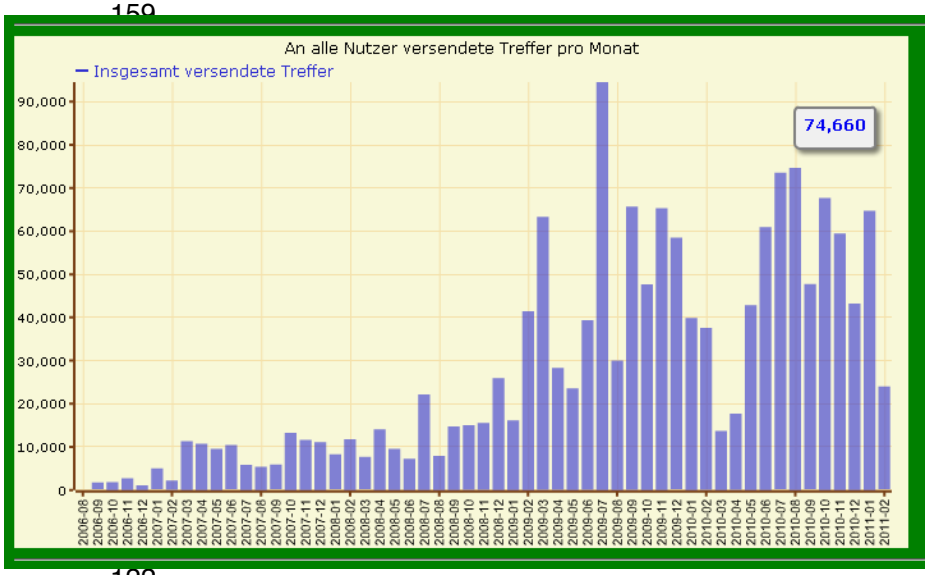
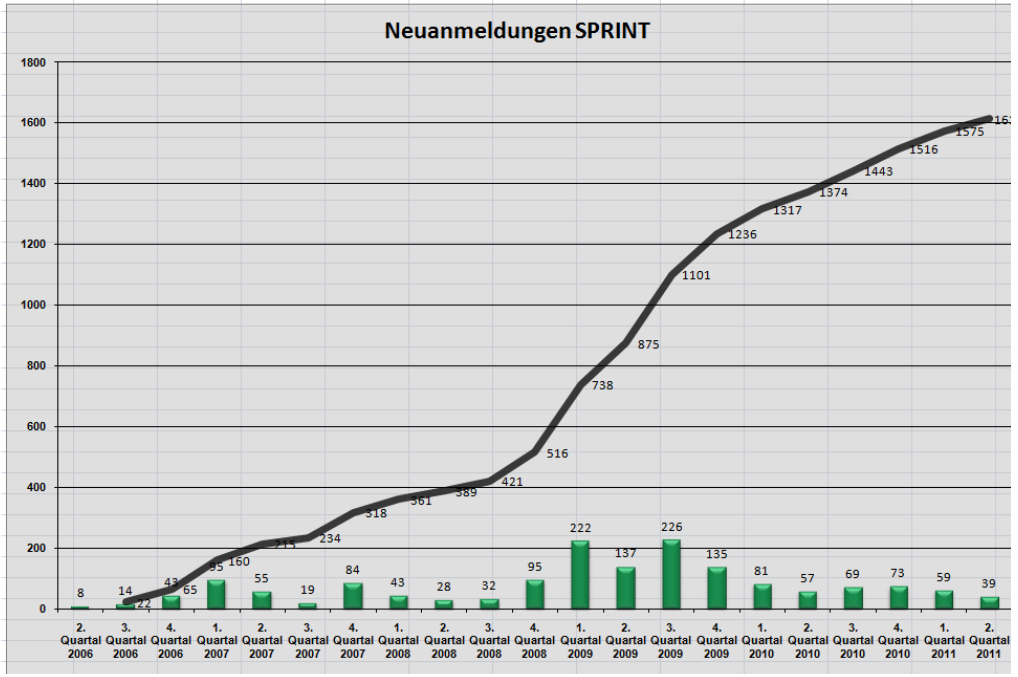
active and individualized information supply

Key words	Rank	Number of profiles
Strength	1	390
Training	2	349
Strength endurance	3	282
Power	4	250
Maximum strength	5	221
Load arrangement	6	206
Coordinative abilities	7	193
Training planning	8	181
Training control	9	171
Swimming	10	167
Load intensity	11	159
Speed	12	
Endurance	13	
Load volume	14	
Sport psychology	15	
Long-term performance build-up	16	
Junior elite sport	17	
Training method	18	
Talent	19	
Training periodisation	20	
Motor learning	21	122

TOP 20 of SPONET -key words in sprint -profiles



number of SPRINT clients



Phase 1 Development and introduction
Phase 2 „Roadshows“ in partnering organisations
Phase 3 Introduction of the „Highlight“ service
Phase 4 Part of coaches‘ training, but also increasing number of clients who have „heard“ about the service
Phase 5 New service for associations „Retrieval tablets“
Phase 6 New content (courses, conferences etc.)

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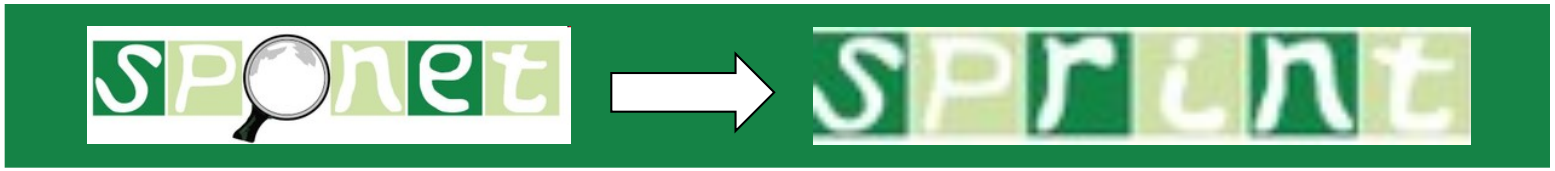
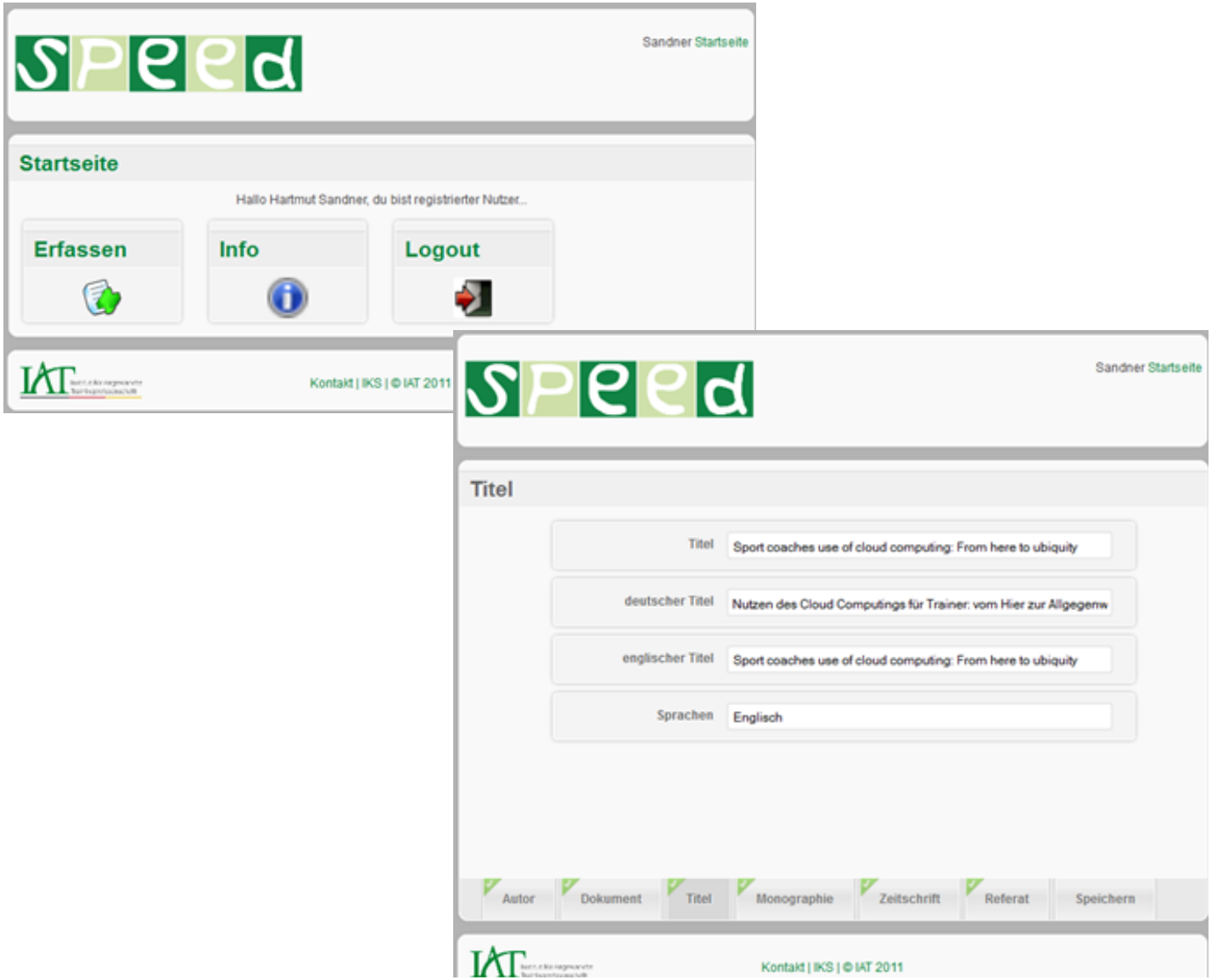


Lawn h o c k e y - a l l topics

Training topics in lawn hockey	Sports medical topics in lawn hockey	Topics of junior elite sport in lawn hockey
Coaching in team ball games	Long-term performance build-up in team ball games	Match observation and analysis in team ball games
Conditioning in team ball games	Sport psychology in team ball games	Access to more databases

participation in database development with SPEED



peer-to-peer communication by SPRINT 1:1

SPRINT 1:1 includes the option to initiate peer-to-peer and/or group discussion, you will be able to comment articles resp. new items and to subscribe to comments for selected items, you will be able to initiate discussion forums.

The basis for all this are individual information profiles. The major intention is to apply the knowledge, the experience and the abilities of community members in a great variety of application cases in an access controlled environment.

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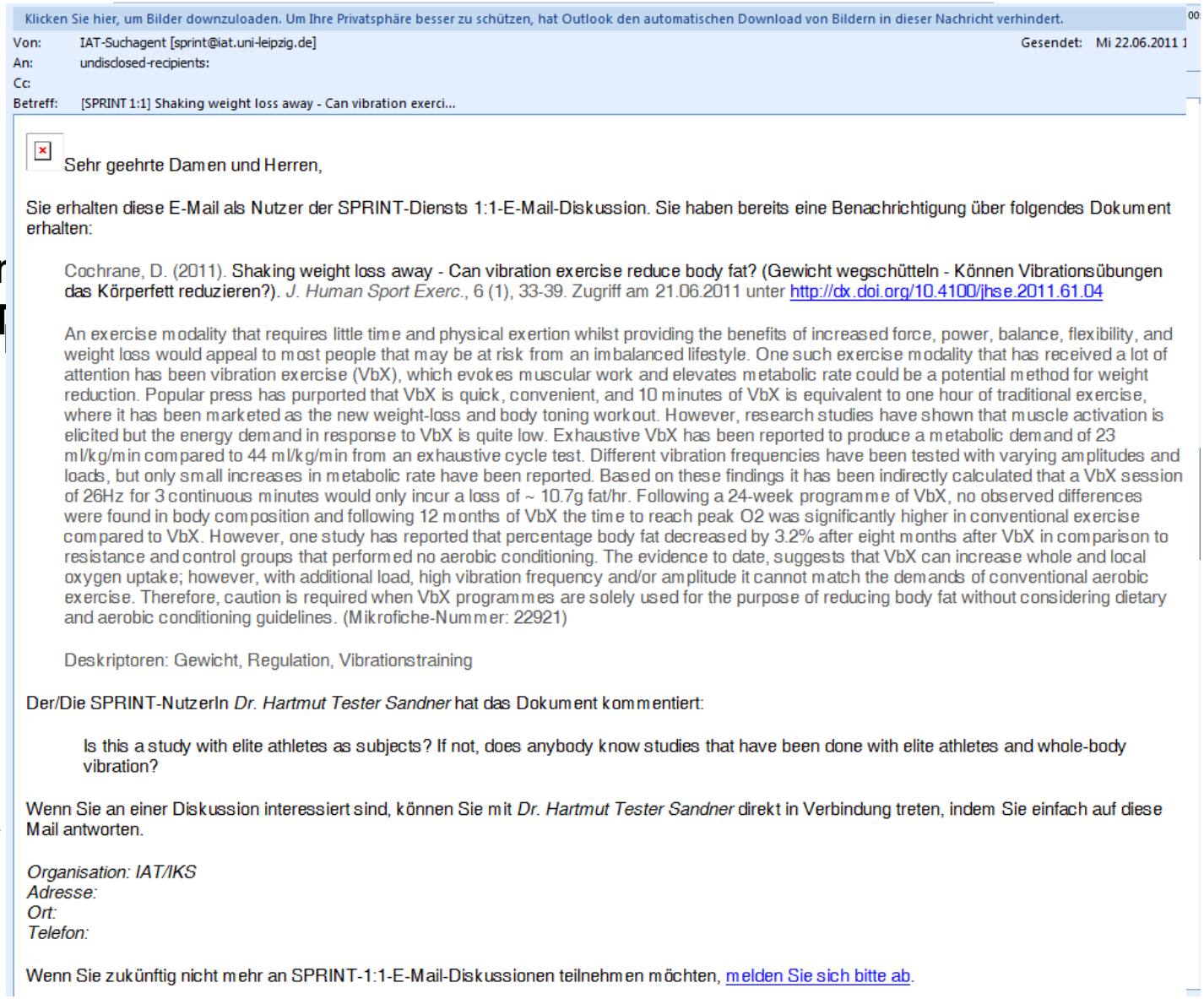
peer-to-peer communication by SPRINT 1:1

initiate discussion inside the SPRINT community

make comments, ask question, present views

Email distributed to all clients with a matching individual profile



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Von: IAT-Suchagent [sprint@iat.uni-leipzig.de] Gesendet: Mi 22.06.2011 1
An: undisclosed-recipients:
Cc:
Betreff: [SPRINT 1:1] Shaking weight loss away - Can vibration exerci...

Sehr geehrte Damen und Herren,

Sie erhalten diese E-Mail als Nutzer der SPRINT-Diensts 1:1-E-Mail-Diskussion. Sie haben bereits eine Benachrichtigung über folgendes Dokument erhalten:

Cochrane, D. (2011). Shaking weight loss away - Can vibration exercise reduce body fat? (Gewicht wegschütteln - Können Vibrationsübungen das Körperfett reduzieren?). *J. Human Sport Exerc.*, 6 (1), 33-39. Zugriff am 21.06.2011 unter http://dx.doi.org/10.4100/jhse.2011.61.04

An exercise modality that requires little time and physical exertion whilst providing the benefits of increased force, power, balance, flexibility, and weight loss would appeal to most people that may be at risk from an imbalanced lifestyle. One such exercise modality that has received a lot of attention has been vibration exercise (VbX), which evokes muscular work and elevates metabolic rate could be a potential method for weight reduction. Popular press has purported that VbX is quick, convenient, and 10 minutes of VbX is equivalent to one hour of traditional exercise, where it has been marketed as the new weight-loss and body toning workout. However, research studies have shown that muscle activation is elicited but the energy demand in response to VbX is quite low. Exhaustive VbX has been reported to produce a metabolic demand of 23 ml/kg/min compared to 44 ml/kg/min from an exhaustive cycle test. Different vibration frequencies have been tested with varying amplitudes and loads, but only small increases in metabolic rate have been reported. Based on these findings it has been indirectly calculated that a VbX session of 26Hz for 3 continuous minutes would only incur a loss of ~ 10.7g fat/hr. Following a 24-week programme of VbX, no observed differences were found in body composition and following 12 months of VbX the time to reach peak O2 was significantly higher in conventional exercise compared to VbX. However, one study has reported that percentage body fat decreased by 3.2% after eight months after VbX in comparison to resistance and control groups that performed no aerobic conditioning. The evidence to date, suggests that VbX can increase whole and local oxygen uptake; however, with additional load, high vibration frequency and/or amplitude it cannot match the demands of conventional aerobic exercise. Therefore, caution is required when VbX programmes are solely used for the purpose of reducing body fat without considering dietary and aerobic conditioning guidelines. (Mikrofiche-Nummer: 22921)

Deskriptoren: Gewicht, Regulation, Vibrationstraining

Der/Die SPRINT-NutzerIn *Dr. Hartmut Tester Sandner* hat das Dokument kommentiert:

Is this a study with elite athletes as subjects? If not, does anybody know studies that have been done with elite athletes and whole-body vibration?

Wenn Sie an einer Diskussion interessiert sind, können Sie mit *Dr. Hartmut Tester Sandner* direkt in Verbindung treten, indem Sie einfach auf diese Mail antworten.

Organisation: IAT/IKS
Adresse:
Ort:
Telefon:

Wenn Sie zukünftig nicht mehr an SPRINT-1:1-E-Mail-Diskussionen teilnehmen möchten, melden Sie sich bitte ab.

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alphabetisch nach Autor
nach Jahr - neuere zuerst

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Suchauftrag:Suchworte: "Judo"
Treffer: 24 (nach Jahr - neuere zuerst)
angezeigte Treffer: 1-10

im Ergebnis springen: **1** 10 20

1 von 24 Leistungssport-Artikel

Jahr: 2010
Autoren: Heinisch, H.-D.; Oswald, R.; Büsch, D.
Titel: Entwicklungstendenzen der Wettkampfleistung im Judo unter Berücksichtigung des Einflusses von Regeländerungen
Volume: 40
Heftnummer: 6
Seiten: 13-20
Deskriptoren: Judo; Wettkampfbestimmung; Leistungsentwicklung; Taktik
Notationen: Kampfsportarten
Referat: Im vorliegenden Beitrag werden Tendenzen in der Entwicklung der Judo-Wettkampfleistung im ersten Jahr des neuen Olympiazyklus unter dem Einfluss [illegible] Wettkampfsystems und im Regelwerk analysiert und diskutiert. Untersucht wird die Fragestellung, wie sich die Wirksamkeit technisch-taktischer Handlungen als Gradmesser einer attraktiven zuschauer- und medienfreundliche[n] und zur Bestrafungshäufigkeit entw[illegible] Profil abzeichnen.

2 von 24 Leistungssport-Artikel

Jahr: 2009
Titel: Nicht alle theoretischen Erkenntnis[illegible] Interview mit Frank Wieneke, Wis[illegible] Köln
Volume: 39
Heftnummer: 6
Seiten: 53-57
Deskriptoren: Judo; Training; Wettkampf
Referat: In dieser Beitragsserie wird das vi[illegible] Hochleistungs- und Nachwuchsbe[illegible] Wettkampfplanung sowie Training[illegible] Schwierigkeiten. Es geht um Top-[illegible] Persönlichkeit. Ebenfalls angespro[illegible] Stressbewältigung und Karriereda[illegible] Der aktuelle Beitrag gibt ein Interv[illegible] Trainerakademie des DOSB in Köln, zu Fragen des Trainings und Wettkampfs im Judo wider.

3 von 24 Leistungssport-Artikel

www.zeitschrift-sportmedizin.de

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Heft 07-08/2006

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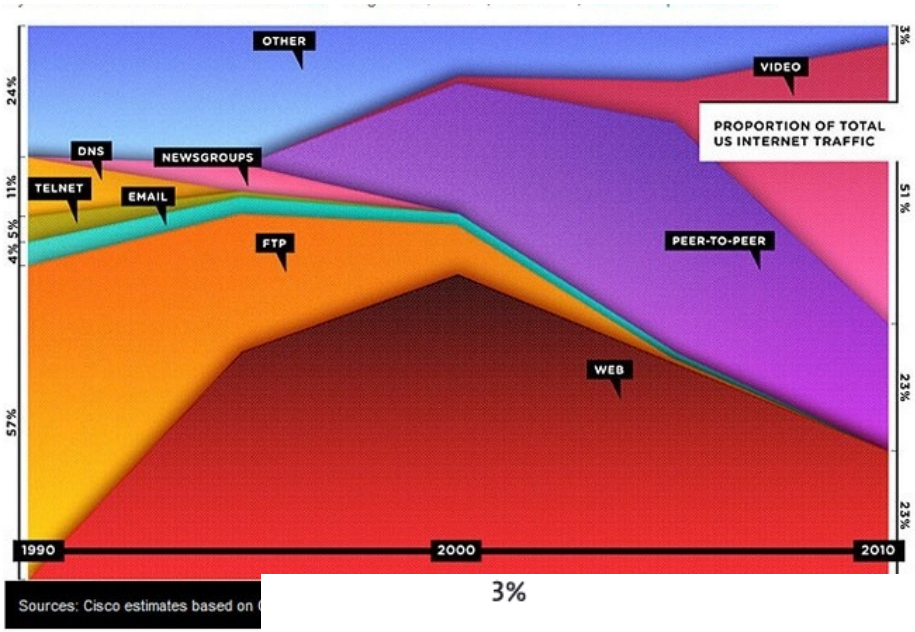
Ein Service für die Mitglieder der Deutschen Gesellschaft für Sportmedizin und Prävention (DGSP): Sollten Sie sportmedizinische Frage haben, auf der Seite der DGSP können Sie eine Anfrage an Experten richten.

03/2007

Jahresinhaltsverzeichnis 2006

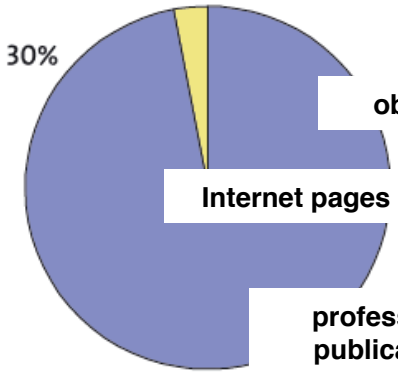
2007:	1	2	3								
Seiten	1-34	47-70	71-94								
2006:	1	2	3	4	5	6	7+8	9	10	11+12	
Seiten	1-31	32-56	57-84	85-112	113-148	149-178	179-210	211-238	239-262	263-286	

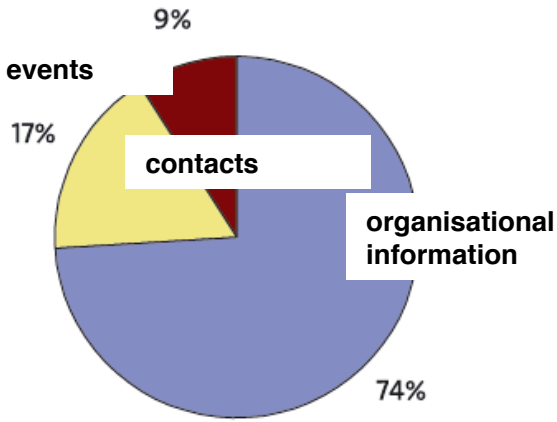
new media – what comes next?



Proportions of media types as part of internet traffic

observations





How often do coaches use observations and video analyses?

vid daily, radio, TV

sport journals

Source: Muckenhaupt (2008). Information supply for coaches

Sportaccord – The Sports Hub

1. The three Olympic core sports athletics, cycling and gymnastics
2. Ball games
3. Combat sports
4. Mind games
5. Racket sports
6. Strength sports
7. Target and precision sports
8. Water sports
9. Winter sports
10. Other sports as dancing, climbing, equestrian
11. Multisport games (as World Games)

Sportaccord as a newly founded international sport federation that obviously has the goal to offer its member organisations new interesting services in the field of new and social media. Today 26 international sport federations resp. Multisport federations offer videos of competitions, which they are the right holder for. Sportaccord‘s Sports Hub offers a multimedia access point to the Internet for all 104 member organisations. Based on a contract with YouTube (signed in December 2009) the international sport federations get access to all functionalities of this most popular international video community.

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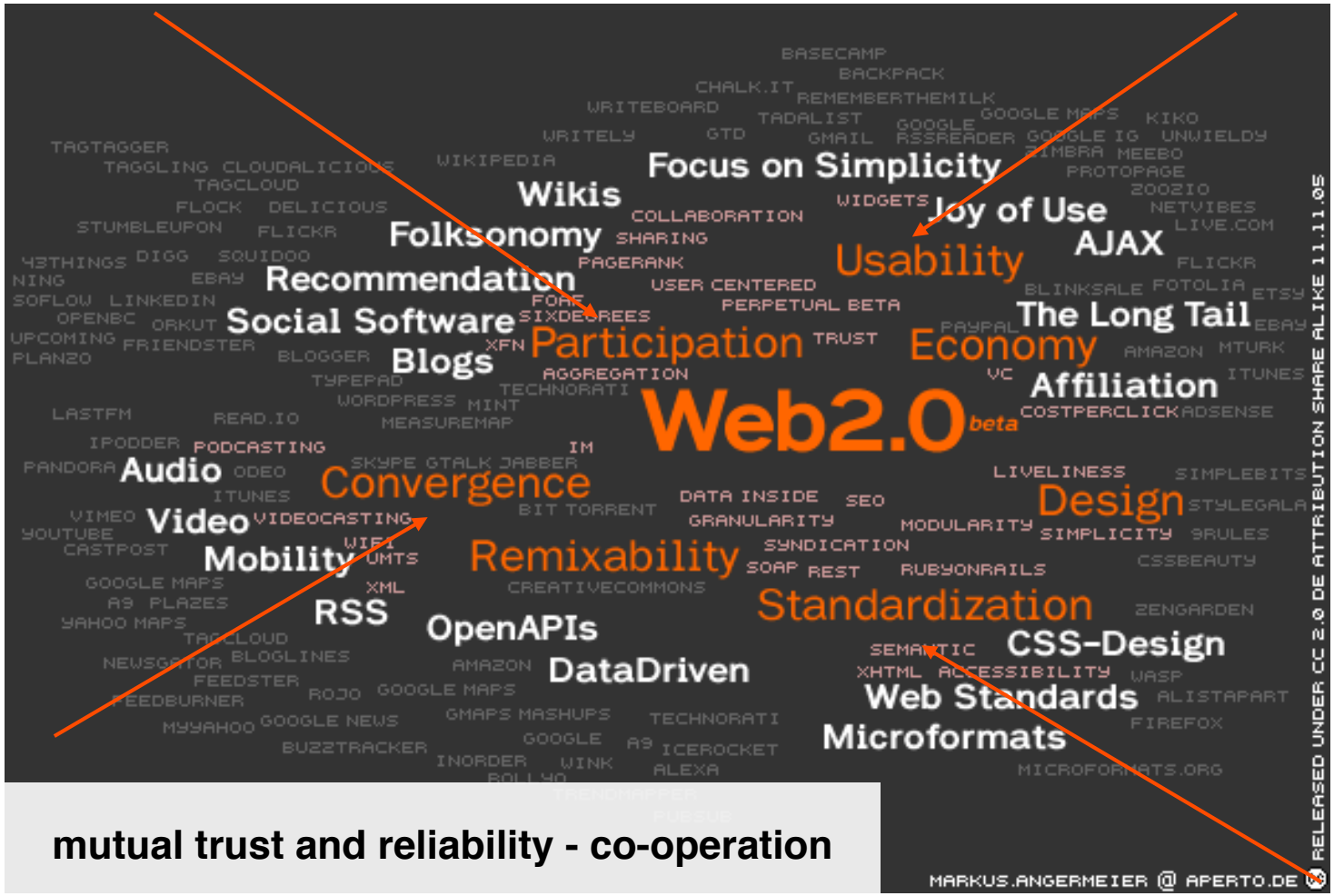
Web 2.0 platform approaches for elite sport



a coordinating body and/or sport information and communication centre with dedicated, skilled and experienced staff

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presentation and retrieval of information and knowledge on platforms

A communication platform in elite sport

community with controlled access

discussion groups

info on training camps

videos

translations

full-texts

educational documents

pre-prints

databases of scientific literature

competition results

open community

electronic dictionary

addresses

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high performance sport platform in New Zealand

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HPS Global Homepage

Reset default layout

Activity *Latest* **14 days** | *Sort by* **Most Recent**

Skin infections in athletes
Athletes are required to take care of their health, as intense tr...more

iSense for muscle fatigue
A PhD student from the University of Essex, Mohamed Al-Mulla, has...more

Allergen problems at the London Olympics
Post-marathon sickness is a common complaint among athletes, and ...more

Strategies to combat sleep deprivation
This study by Cook et al. (2011) looked at the effect of sleep de...more

Learning from mistakes
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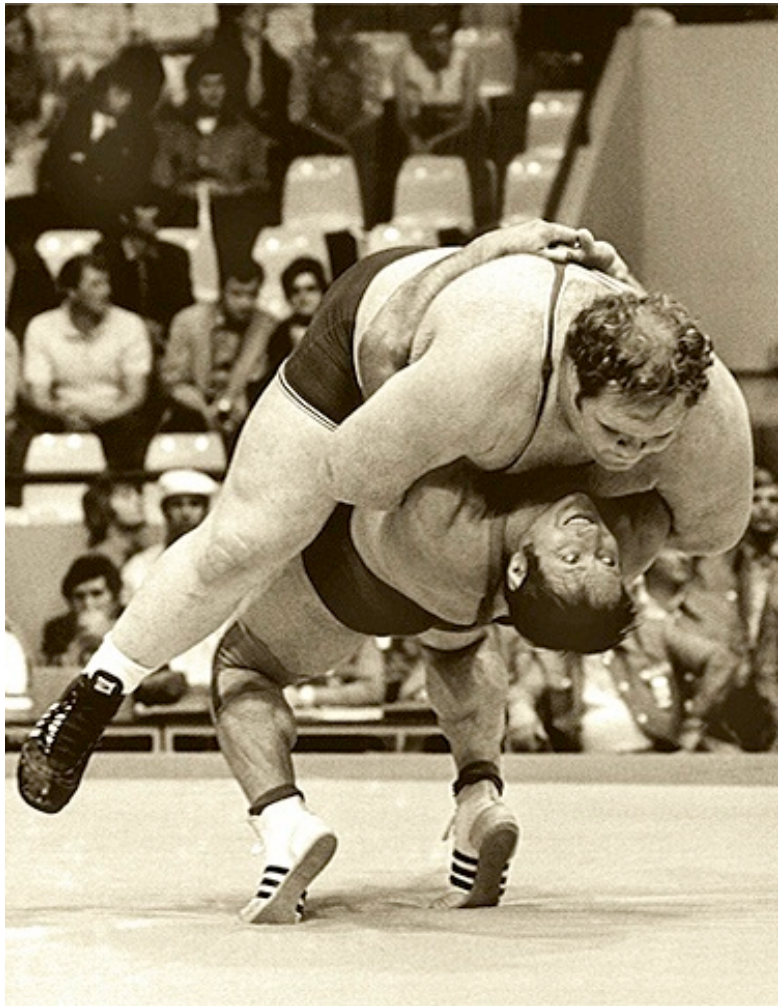

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So that the possible may arise, the impossible must always be attempted.

Hermann Hesse

Better informed!

but

citius – altius - fortius ?

Thank you for your attention!

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