

TREC Video Retrieval Evaluation

TRECVID 2017

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Darrin Dimmick*	Maria Eskevich	(Radboud University Nijmegen)
	Gareth Jones	(Dublin City University)
Jonathan Fiscus**	Benoit Huet	(EURECOM)
David Joy**		
Martial Michel^	Stephanie Strassel+	
Andrew Delgado**	Xuansong Li+ et al	

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Information Access Division
Information Technology Laboratory
NIST

^ Data Machines Corp.

+ Linguistic Data Consortium

Dakota Consulting, Inc

What is TRECVID?

Workshop series (2001 – present) → <http://trecvid.nist.gov>
to promote research/progress in content-based video analysis/exploitation

Foundation for large-scale laboratory testing

Forum for the

- ✓ exchange of research ideas
- ✓ discussion of approaches – what works, what doesn't, and why.

Focus: content-based approaches

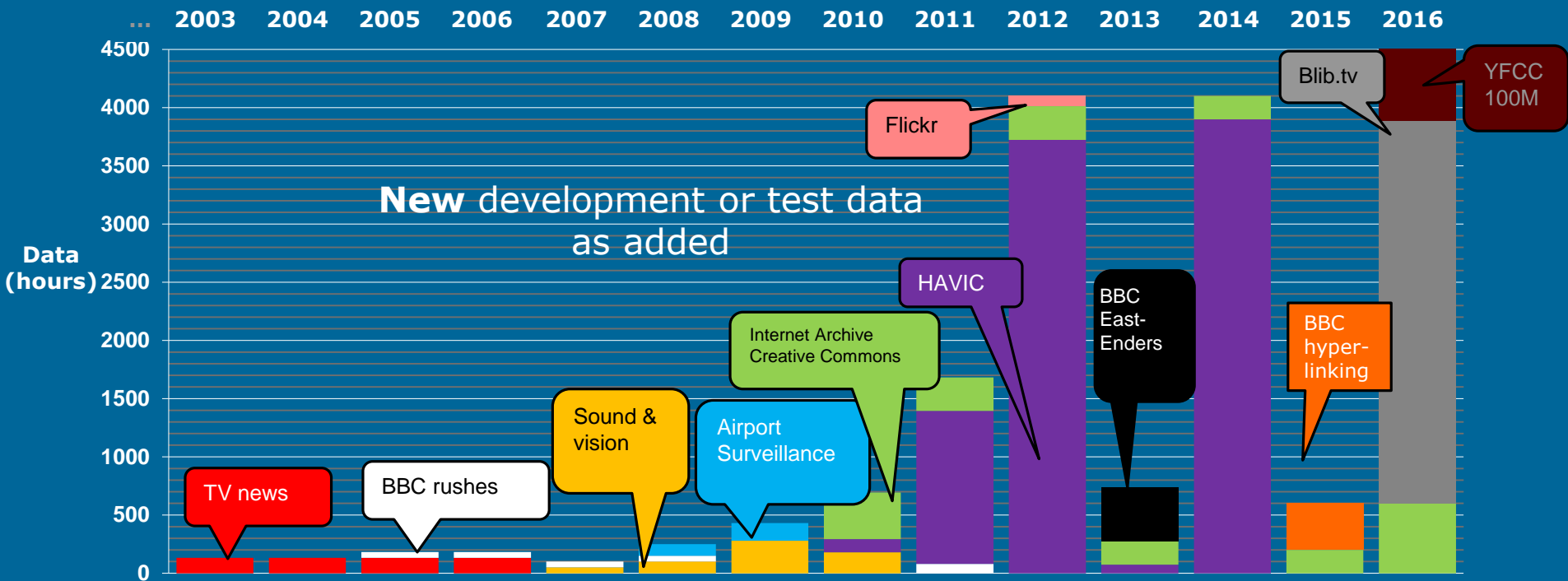
- ✓ search / detection / summarization / segmentation / ...

Aims for realistic system tasks and test collections

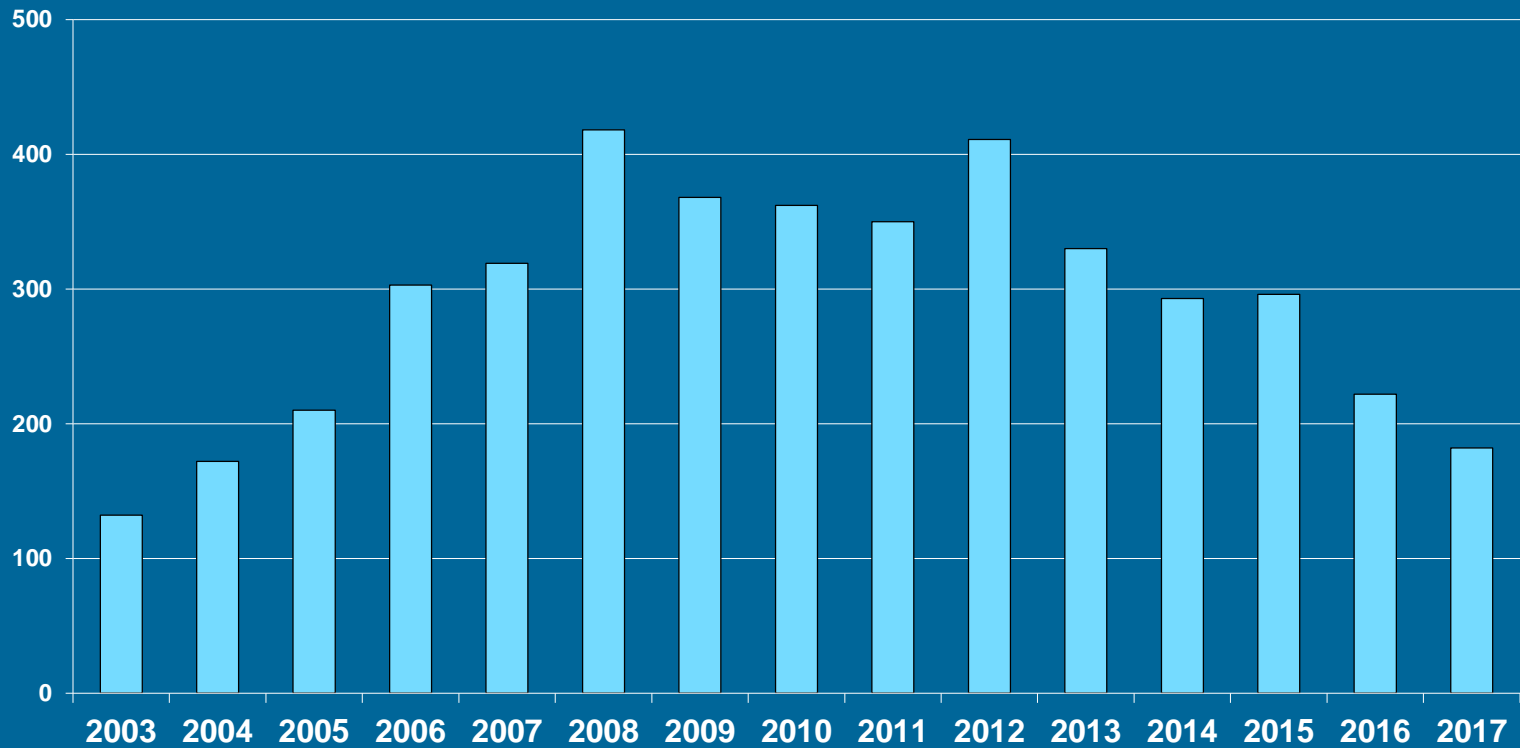
- ✓ unfiltered data
- ✓ focus on relatively high-level functionality (e.g. interactive search)
- ✓ measurement against human abilities

Provides data, tasks, and uniform, appropriate scoring procedures

TRECVID's Evolution

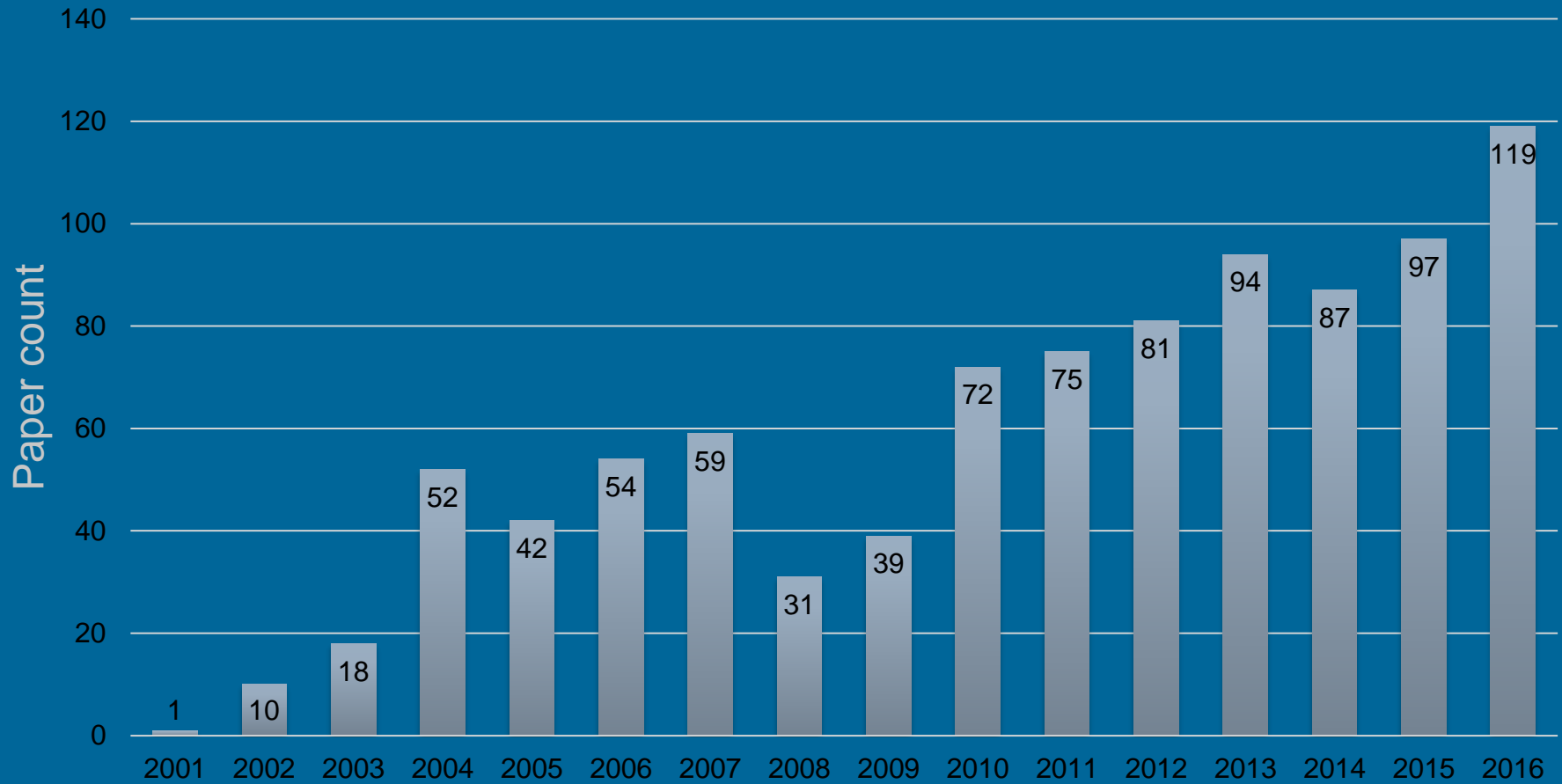


Notebook author count by years



TRECVID Bibliography

Partial bibliography of peer-reviewed journal and conference papers
(ACM Digital Library and IEEE Explorer) based on TRECVID resources



<http://www-nlpir.nist.gov/projects/trecvid/trecvid.bibliography.txt>

TRECVID 2017 Tasks and Data

<p>Internet Archive – Creative Commons (IACC)</p> <p>600 h test data, video, title, keywords, description</p> <p>~1200 hours dev video, metadata</p>	<p>BBC EastEnders</p> <p>464 h divided into 471527 shots</p>	<p>Blib.tv Video Hyperlink</p> <p>c. 3288 h Blib.tv data</p>	<p>Airport surveillance</p> <p>Subset of 10 h test video + 2 h of group dynamic subset</p> <p>100 h dev video</p>	<p>HAVIC - Internet multimedia</p> <p>3713 h, test video 2116 h, dev video ----- YFCC100M</p> <p>2050 h, test video</p>
<p>Ad hoc video search 30 textual only queries evaluated)</p>	<p>Instance search (30 ad hoc image & video test queries)</p>	<p>Video Hyperlinking (25 test anchors)</p>	<p>Surveillance event Detection (7 known test events + 3 group dynamic events)</p>	<p>Multimedia event detection (10 pre-specified &/or 10 ad hoc complex test events)</p>
<p>Video-To-Text (1880 URLs of Twitter Vine videos)</p>				

TV2017 Finishers : 35 teams out of 76

burka	---	---	VTT	MED	---	---	AFRL
Arete	---	---	***	---	---	---	Arete Associates
rponnega	---	---	---	MED	---	---	Arizona State University
ADVICE	INS	LNK	VTT	MED	SED	AVS	Baskent University
BUPT_MCPRL	***	---	---	***	***	AVS	Beijing University of Posts and Telecommunications
drBIT	---	---	---	MED	SED	---	Beijing Institute of Technology
MCISLAB	---	---	---	***	---	---	Beijing Institute of Technology
CMUBOSCH	---	---	***	---	---	---	Carnegie Mellon University Robert Bosch LLC, Research Technology Center
UTS_CAI	---	---	***	---	---	---	Center of AI, University of Technology Sydney
TUC_HSMW	***	---	---	---	---	---	Chemnitz University of Technology University of Applied Sciences Mittweida
UPCer	---	---	***	MED	---	---	China university of Petroleum
CCNY	---	---	***	---	---	---	City College of New York, CUNY The Graduate Center, CUNY
VIREO	---	***	***	MED	---	***	City University of Hong Kong
U_TK	INS	---	---	---	---	---	Dept. of Information Science & Intelligent Systems, The University of Tokushima
EJUST_CPS	---	---	---	---	SED	---	Egypt-Japan University of Science and Technology.(EJUST)
mounira	---	LNK	VTT	MED	---	---	ENIG
KBVR	---	---	***	---	---	---	Etter Solutions
EURECOM	---	LNK	---	---	---	***	EURECOM
UNCFSU	---	---	VTT	---	SED	---	Fayetteville State University
FIU_UM	---	---	---	---	---	***	Florida International University University of Miami
Fudan	---	---	---	MED	---	---	Fudan University
FXPAL	---	LNK	---	---	---	---	FX Palo Alto Laboratory, Inc.
kobe_nict_siegen	---	---	---	---	---	***	Graduate School of System Informatics, Kobe University, Japan Center for Information and Neural Networks, National Institute of Information and Communications Technology (NICT), Japan Pattern Recognition Group, University of Siegen, Germany

TV2017 Finishers

V.DO	---	---	---	---	---	AVS
HFUT_Multimedia_BW	---	---	VTT	---	---	AVS
Victors	INS	---	---	---	---	---
ITI_CERTH	***	---	---	***	***	***
DCU.Insight.ADAPT	---	---	***	---	---	---
IRIM	***	---	---	---	---	---
KU_ISPL	---	---	***	---	---	---
IRISA	---	***	---	---	---	---
JRS	INS	---	---	---	---	AVS
TCL_HRI_team	---	---	---	MED	---	---
ITEC_UNIKLU	---	LNK	---	---	---	***
LIG	---	---	---	MED	---	AVS
DreamVideo	---	---	VTT	MED	---	---
mcmliangwengogo	---	---	---	---	SED	---
NTUROSE	INS	---	---	---	---	---
DLMSLab20170109	---	---	---	---	SED	---
NII_Hitachi_UIT	***	LNK	***	MED	***	***
NUSLV	---	---	---	MED	SED	---

Graduate School of Convergence Science and Technology(GSCST), Seoul National University(SNU).
Hefei University of technology
IIT
Information Technologies Institute, Centre for Research and Technology Hellas
Insight Centre for Data Analytics @ DCU Adapt Centre for Digital Content and Media
Institut Eurecom (EURECOM) Laboratoire Bordelais de Recherche en Informatique (LABRI) Laboratoire d'Informatique de Grenoble (LIG) Laboratoire d'Informatique pour la Mécanique et les Sciences de l'Ingénieur (LIMSI) Laboratoire d'Informatique, Systèmes, Traitement de l'Information et de la Connaissance (LISTIC)
Intelligent Signal Processing Laboratory of Korea University
IRISA, CNRS, INRIA & INSA Rennes, Univ. Rennes 1
JOANNEUM RESEARCH Forschungsgesellschaft mbH
KAIST
Klagenfurt University
LIG/MRIM
Multimedia Research Center, HKUST
Multimedia Communication Laboratory at MCM Inc.
Nanyang Technological University
National Central University CSIE
National Institute of Informatics, Japan (NII); Hitachi, Ltd; University of Information Technology, VNU-HCM, Vietnam (HCM-UIT)
National University of Singapore

TV2017 Finishers

REGIMVID	INS LNK VTT MED SED ---	National Engineering School of Sfax (Tunisia)
WHU_NERCMS	*** --- --- --- --- ---	National Engineering Research Center for Multimedia Software, Wuhan University
NOVAsearch	--- LNK --- MED --- ---	NOVA Laboratory for Computer Science and Informatics Universidade NOVA Lisboa
NTT_NII	*** --- --- --- --- ---	NTT Communication Science Laboratories, National Institute of Informatics
ORAND	--- --- --- MED --- AVS	ORAND S.A. Chile
PKU_ICST	*** LNK VTT MED SED AVS	Peking University
PKUMI	INS --- VTT MED SED ---	Peking University
prna	--- --- VTT --- --- ---	Philips Research North America
EURECOM_POLITO	--- *** --- --- --- ---	Politecnico di Torino and Eurecom
LaMas	--- LNK --- --- --- ---	Radboud University, Nijmegen
INF	--- --- *** *** *** ***	Renmin University Shandong Normal University Chongqing university of posts and telecommunications
RUC_CMU	--- --- *** --- --- ---	Renmin University of China Carnegie Mellon University
SSCLL_Team	INS --- --- MED SED ---	Sfax Smart City Living Lab (SSCLL)
SDNU_MMSys	--- --- *** --- SED ---	Shandong Normal University
BCMI	--- --- --- MED *** ---	Shanghai Jiao Tong University
Texot	--- --- --- --- SED ---	Shanghai Jiao Tong University
SeuGraph	--- --- --- --- *** ---	Southeast University Computer Graphics Lab
strong	--- --- --- MED --- ---	srm university, india
CVPIA	--- --- VTT --- --- ---	The University of Memphis
DL-61-86	--- --- *** --- --- ---	The University of Sydney Zhejiang University
UEC	--- LNK VTT MED --- AVS	The University of Electro-Communications, Tokyo
shiyue	INS LNK VTT MED SED ---	TianJin University
Superimage2017	--- --- --- MED --- ---	Tianjin University

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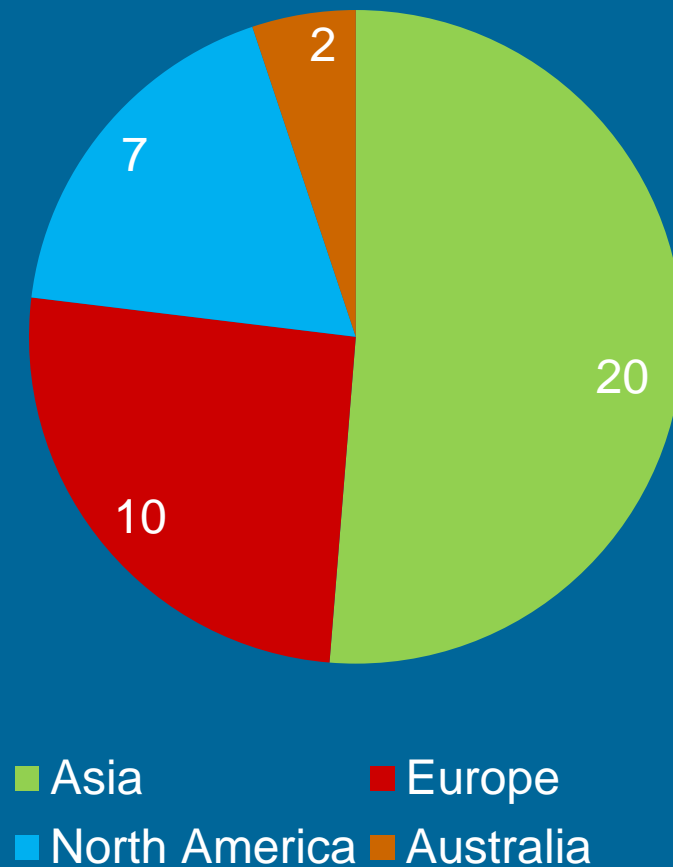
TJU_NUS --- --- *** --- --- ---
 TokyoTech_AIST --- --- VTT *** --- AVS
 MediaMill --- --- *** *** SED ***
 MHUG --- --- --- MED --- ---
 Sheff_UET INS --- VTT --- SED ---
 UNTCV --- --- VTT --- SED ---
 Visionelites --- --- --- --- --- AVS
 VislabUCR --- --- --- MED SED ---
 vitrivr --- --- --- --- --- AVS
 YamaLab --- --- --- MED --- ---
 IQ INS LNK VTT MED SED ---
 SITE --- --- --- MED --- ---
 Waseda_Meisei --- --- VTT MED --- ***
 WHU_IIP --- --- --- --- *** ---

Tianjin University & National University of Singapore
 Tokyo Institute of Technology, National Institute of Advanced
 Industrial Science and Technology
 University of Amsterdam
 University of Trento
 University of Engineering and Technology Lahore, Pakistan
 The University of Sheffield, UK
 University of North Texas
 University of Moratuwa, Sri Lanka.
 University of California, The Visualization and Intelligent
 Systems Laboratory (VISLab)
 University of Basel
 University of Tokyo Graduate School of Arts and Sciences
 Vaplica Group Llc
 VIT University, Vellore
 Waseda University; Meisei University
 Wuhan University

TV2017 Finishers

Groups Finished	Task code	Task name
7	SED	Surveillance event detection
10	AVS	Ad-hoc Video Search
8	INS	Instance search
6	MED	Multimedia event detection
3	LNK	Video hyperlinking
16	VTT	Pilot task (Video_to_Text)

Unique finishing teams



Support

The running of TRECVID 2017 has been funded directly by:

- National Institute of Standards and Technology (NIST)

TRECVID is only possible because of the additional efforts of many individuals and groups around the world.

Additional resources and contributions

- Georges Quénot
 - provided the master shot reference for the IACC.3 video
 - arranged for ASR for IACC.3 video
- Koichi Shinoda of the TokyoTechCanon team agreed to host a copy of the IACC.2 data
- The LIMSI Spoken Language Processing Group and Vocapia Research provided ASR for the IACC.2-3 videos and HAVIC data
- Noel O'Connor and Kevin McGuinness at Dublin City University along with Robin Aly at the University of Twente worked with NIST and Andy O'Dwyer plus William Hayes at the BBC to make the BBC EastEnders video available for use in TRECVID
- Roeland Ordelman (Univ. of Twente, NL), Maria Eskevich (Radboud Univ.) , Benoit Huet (Eurecom, Fr), and Gareth Jones (DCU, Ir) Coordinated the Video hyperlinking task
- Alan Smeaton and Yvette Graham (DCU, Ir) for supporting the video-to-text Direct Assessment annotations

Agenda: Day 1

- Arranged by task
- Time for discussion of approaches & evaluation
- Monday
 - Intros, thanks, etc.
 - Ad hoc video search
 - Lunch
 - Multimedia Event Detection
 - Surveillance Event Detection
 - Workshop dinner

Agenda: Day 2

- Tuesday
 - Video Hyperlinking
 - Video to Text
 - Lunch
 - Special talk about algorithm development with virtual environments.
 - Poster/demo boaster
 - Posters and demos with refreshments

Agenda: Day 3

- Wednesday
 - Instance Search
 - TRECVID planning
 - Workshop close

Miscellany

- If you have registered for the workshop dinner and will not be using your ticket, please turn it in at the registration desk during the break this morning or at lunch so someone else who wants to attend can use it.
- Breakfast, morning and afternoon breaks: **Heritage Room**
- Wifi: NIST-Guest