

TREC Video Retrieval Evaluation

TRECVID 2012

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+ Linguistic Data Consortium

Dakota Consulting, Inc
Silver Spring, MD

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

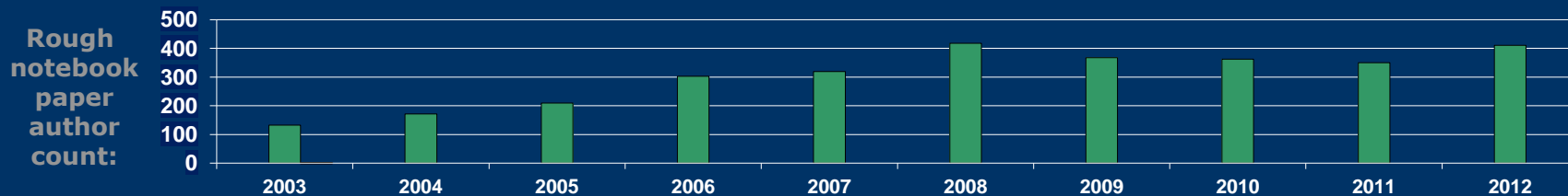
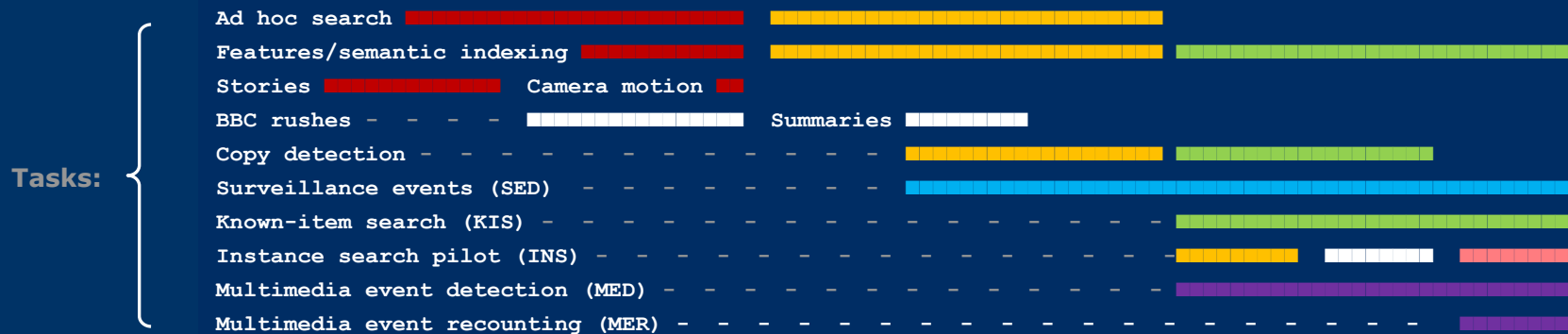
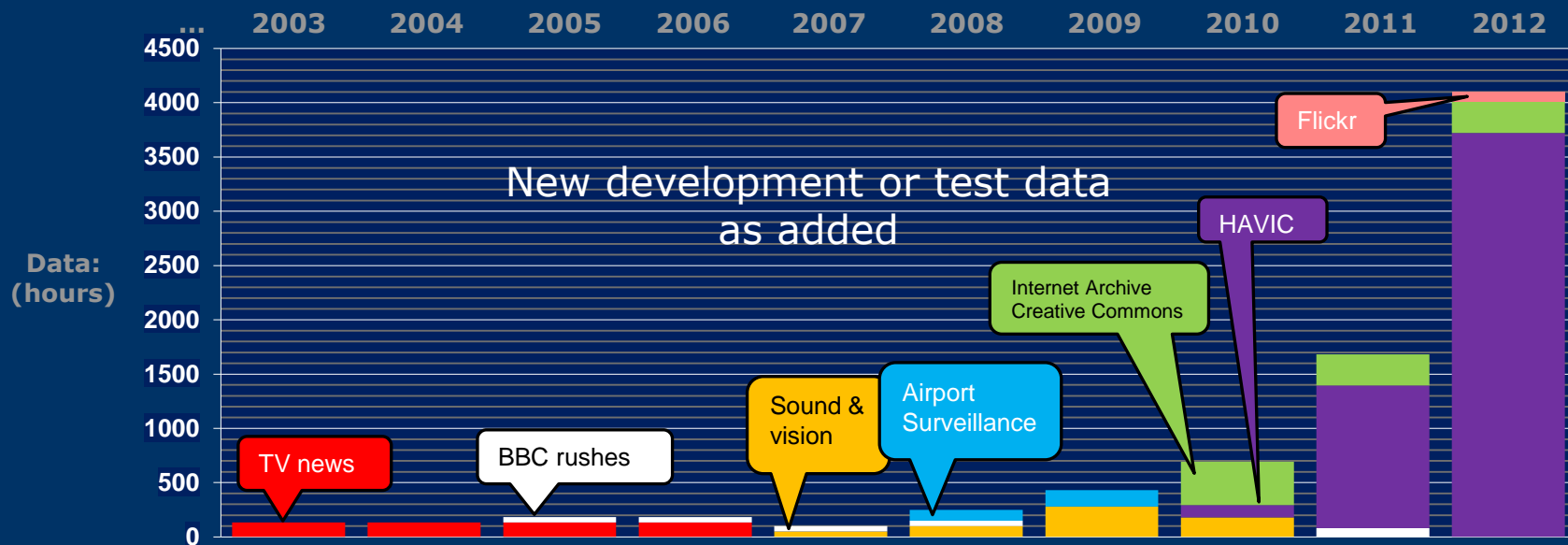
- search / detection / summarization / segmentation / ...

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



TRECVID 2012 Tasks and Data

<p>Internet Archive – Creative Commons (IACC)</p> <p><i>291 hours test data, video, title, keywords, description</i></p> <p><i>687 hours dev video, metadata</i></p>	<p>Flickr</p> <p><i>91 test video clips divided into 74,958 files</i></p>	<p>Airport surveillance</p> <p><i>50 hours, test video</i></p> <p><i>100 hours, dev video</i></p>	<p>HAVIC - Internet multimedia</p> <p><i>3722 hours, test video</i></p> <p><i>1429 hours, dev video</i></p>
<p>Known-item search (361 text-only ad hoc test queries)</p>	<p>Instance search pilot (21 ad hoc image test queries)</p>	<p>Surveillance event detection (interactive) (7 known test events, choose 3)</p>	<p>Multimedia event detection (20 pre-specified & 5 ad hoc complex test events)</p>
<p>Semantic indexing (346 known test concepts, auto-assigned, submitted; 46 evaluated; 10 concept-pairs evaluated)</p>			<p>Multimedia event recounting pilot (5 events)</p>

TV2012 Finishers

PicSOM	INS	KIS	---	---	---	SIN	Aalto U.
AXES	INS	KIS	MED	---	---	---	Acess to Audiovisual Archives: www.axes-project.eu
ATTLabs	INS	---	---	---	---	***	AT&T Labs Research
BUPT.MCPRL	INS	KIS	***	---	SED	***	Beijing U. of Posts and Telecommunications
Bilkent	INS	---	---	---	---	***	Bilkent U. RETINA Vision and Learning Group
INF	---	---	***	***	SED	SIN	Carnegie Mellon U.
CEALIST	INS	---	***	---	---	SIN	CEA
VIREO	INS	***	MED	MER	---	SIN	City U. of Hong Kong
CU	***	---	MED	MER	---	---	Columbia U.
PRISMA-Orand	INS	---	---	---	---	---	Department of Computer Science, U. of Chile.
U_Tokushima	INS	---	---	---	---	***	U. of Tokushima
DCU_IAD	INS	KIS	MED	MER	---	---	Dublin City U., IAD
dcu_savasa	---	---	---	---	SED	---	Dublin City U., CLARITY
ECL_Liris	***	***	***	---	---	SIN	Ecole Centrale de Lyon, Universit de Lyon
EURECOM	---	---	***	---	---	SIN	EURECOM - Multimedia Communications
VideoSense	---	---	---	---	---	SIN	EURECOM VideoSense Consortium
Brno	***	---	---	---	SED	***	Faculty of Information Technology, Brno U. of Technology
FIU_UM	---	---	---	---	---	SIN	Florida International U. U. of Miami
FTRDBJ	INS	---	---	---	---	SIN	France Telecom Orange Labs (Beijing)
MADM	INS	---	---	---	---	---	German Research Center for Artificial Intelligence
IBM	***	***	MED	MER	SED	SIN	IBM T. J. Watson Research Center
ITI_CERTH	***	KIS	MED	MER	---	SIN	Informatics and Telematics Institute, Greece
Quaero	***	---	***	---	---	SIN	INRIA, IRIT, LIG, U. Karlsruhe
ARTEMIS.Ubimedia	INS	---	---	---	---	---	Institut TELECOM; TELECOM SudParis; France Alcatel-Lucent
BJTU_SED	---	---	---	---	SED	---	Inst. of Information Science, Beijing Jiaotong U.
ECNU	---	---	MED	---	---	SIN	Inst. of Computer Applications, East China Normal U.
PKU_ICST	INS	KIS	***	---	---	***	Inst. of Computer Science and Technology, Peking U.
PKU_OS	---	---	---	---	SED	---	Inst. of Computer Science and Technology, Peking U. (OS)
IRIM	INS	---	***	---	---	SIN	Indexation et Recherche d'Information Multimédia GDR-ISIS
JRS.VUT	INS	---	***	---	---	SIN	JOANNEUM RESEARCH FmbH Vienna U. of Technology
KBVR	---	KIS	***	---	---	---	KB Video Retrieval

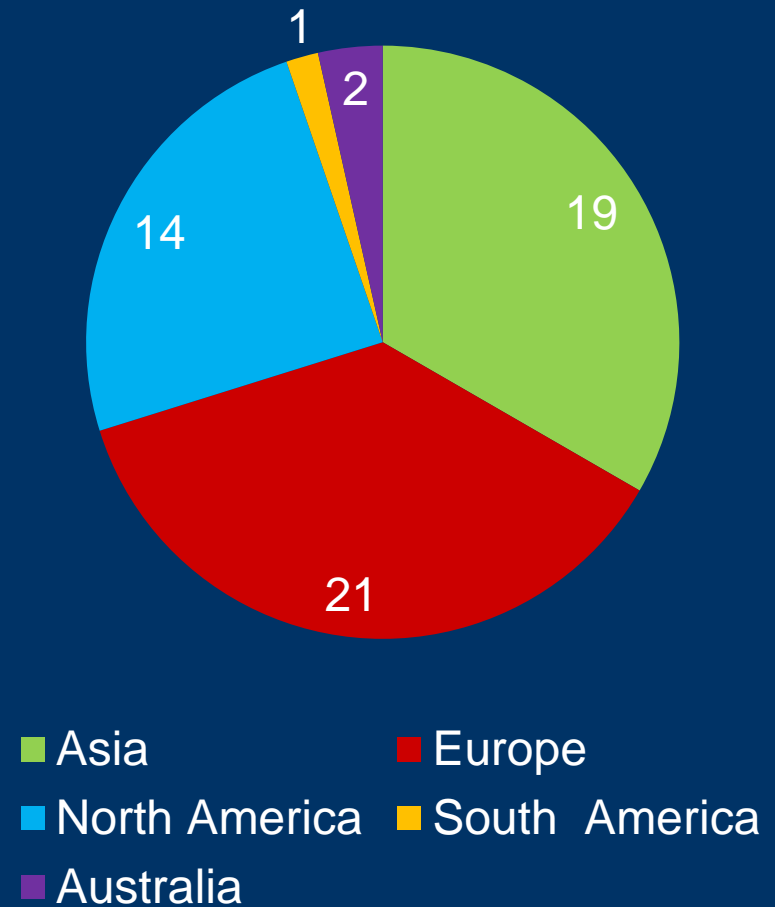
TV2012 Finishers

GENIE	---	---	MED	MER	---	---	Kitware Inc.
ITEC_KLU	---	KIS	---	---	---	---	Klagenfurt U.
kobe_muroran	---	---	***	---	---	SIN	Kobe U., Muroran Institute of Technology
NII	INS	KIS	MED	---	***	SIN	National Institute of Informatics
NHKSTRL	***	***	***	---	***	SIN	NHK Science and Technical Research Labs
NTT_NII	INS	---	MED	***	---	---	NTT Communication Science Labs, Nat. Inst. of Informatics
ntt	---	---	---	---	---	SIN	NTT Cyber Space Labs School of Software, Dalian U.
IMP	INS	---	MED	---	---	---	Osaka Prefecture U.
PKU_NEC	---	---	---	---	SED	---	Peking U. and NEC Labs China
SAIVT	---	---	---	---	SED	---	Queensland U. of Technology
BBNVISER	---	---	MED	MER	---	---	Raytheon BBN Technologies
RMIT	INS	---	---	---	---	---	RMIT U. School of CS&IT
IRC_Fuzhou	---	***	---	---	---	SIN	School of Mathematics and Computer Science Fuzhou U.
SJTU_BCMI	---	---	---	---	SED	---	Shanghai Jiaotong U.
Aurora	---	---	MED	MER	---	---	SRI International Sarnoff Aurora
SESAME	---	---	MED	MER	---	---	SRI International SESAME
stanford	***	---	---	---	---	SIN	Stanford U.
MediaCCNY	---	---	---	---	SED	---	The City College of New York Media Team
TNOM3	INS	---	---	---	---	---	TNO
TokyoTechCanon	---	---	MED	***	---	SIN	Tokyo Institute of Technology and Canon
GIM	---	---	---	---	---	SIN	U. of Extremadura
MediaMill	INS	---	MED	MER	---	SIN	U. of Amsterdam
sheffield_harbin	INS	---	---	---	---	---	U. of Sheffield
UCSB_UCR_VCG	INS	---	---	---	SED	---	U. of California, Santa Barbara
UEC	***	***	MED	---	---	SIN	U. of Electro-Communications
VIVA_uOttawa	---	---	---	---	SED	---	U. of Ottawa

TV2012 Finishers

Groups Finished	Task code	Task name
13	SED	Surveillance event detection
25	SIN	Semantic indexing
9	KIS	Known-item search
24	INS	Instance search pilot
17	MED	Multimedia event detection
10	MER	Multimedia event recounting

Unique finishing teams



Support

The running of TRECVID 2012 has been funded directly by:

- ❑ National Institute of Standards and Technology (NIST)
- ❑ Intelligence Advanced Research Projects Activity (IARPA)

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

Additional resources and contributions

- Georges Quénot with Franck Thollard, Andy Tseng, Bahjat Safadi from LIG and Stéphane Ayache from LIF
 - shared coordination of the semantic indexing task
 - provided the master shot reference for the IACC.1.C video
 - organized judging of 31 concepts with support from the Quaero program

- Georges Quénot and Stéphane Ayache again organized a collaborative annotation

- Michael Hradiš et al at Brno University provided additional annotations for 300 hours of the IACC.1.C videos

- Cees Snoek helped choose the SIN concept pairs and provided 4 baseline concept-pair runs

Additional resources and contributions

- Robin Aly at the University of Twente worked with NIST to develop various queries and ran them against Flickr to form the basis of the INS test data for 2012, available under Creative Commons licensing
- Alan Smeaton and Brian Boyle at DCU arranged for the mirroring of the video data
- Kevin McGuinness (DCU) ran the oracle at DCU for interactive systems in the known-item search task.
- The LIMSI Spoken Language Processing Group and VexSys Research provided ASR for the IACC.1.C videos

Agenda: Day 1

- ❑ Arranged by task
- ❑ Time for discussion of approaches & evaluation
- ❑ **Monday**
 - ❑ Intros, thanks, etc.
 - ❑ Multimedia event detection
 - ❑ Lunch
 - ❑ Known-item search
 - ❑ Semantic Indexing
 - ❑ Workshop dinner

Agenda: Day 2

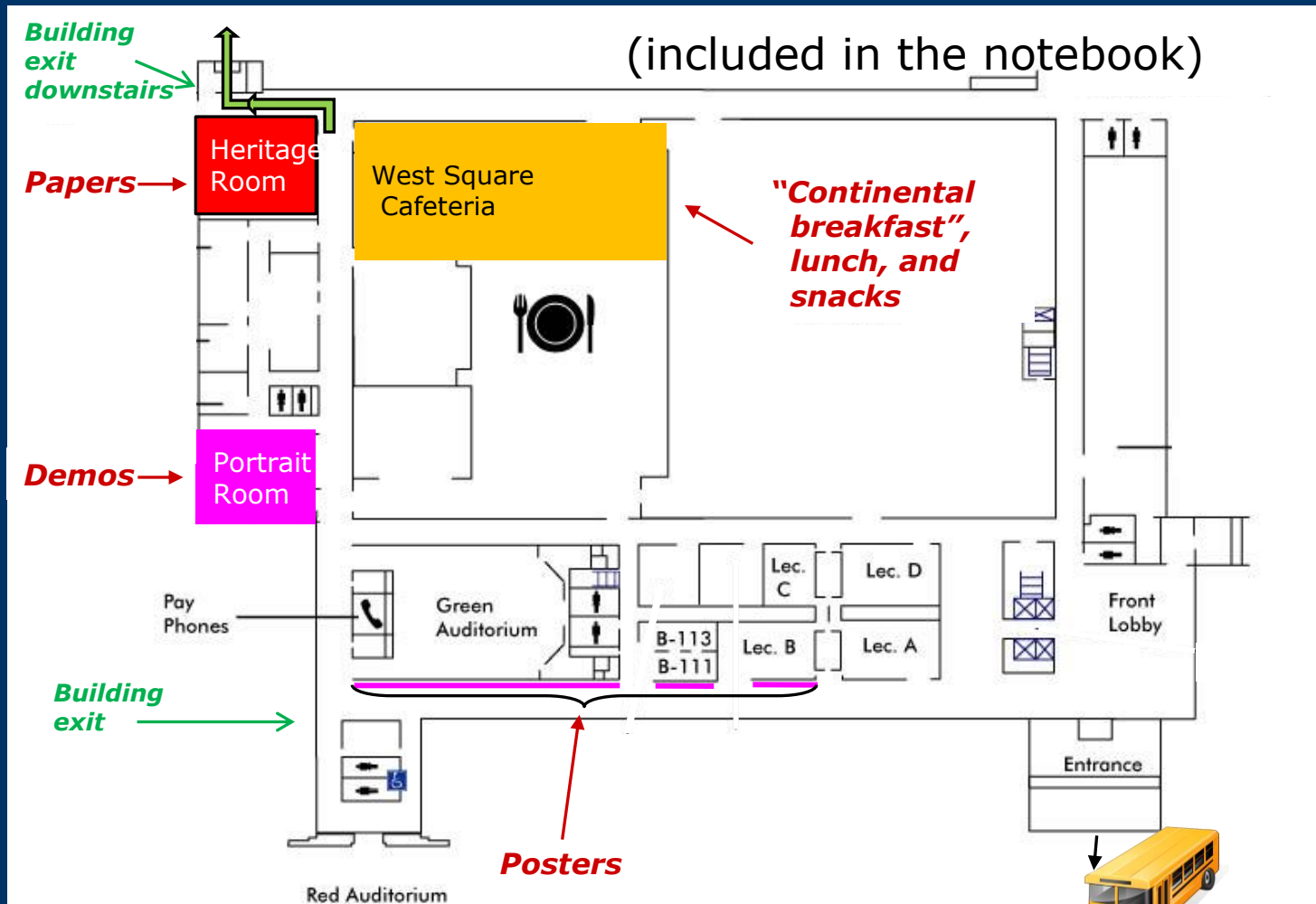
□ Tuesday

- Instance search
- Surveillance event detection
- Lunch
- Surveillance event detection (conclusion)
- Poster/demo boaster
- Posters and demos

Agenda: Day 3

- Wednesday
 - Multimedia event recounting
 - TRECVID planning
 - Workshop close
 - Lunch

Map: NIST Admin. Building, 1st Floor



Reminders

- ❑ If you are driving to NIST rather than taking the NIST bus, you don't need to stop at the Visitor Center tomorrow.
 - ❑ Just show you conference badge and photo ID at the gate as you drive in.
 - ❑ Wear your badge at all times while at NIST; stay in the public areas
- ❑ Lunch will be in the NIST West Square Cafeteria (except Wed.)
 - ❑ Your ticket (from your badge holder) will be collected as you enter the cafeteria
 - ❑ Choose whatever you want from the buffet and proceed to a table
- ❑ If you indicated that you have special dietary requirements on the TRECVID registration form, please see an attendant at the registration desk before going to the prepared workshop lunch.
- ❑ The workshop supper is at the Flaming Pit in Gaithersburg. This is a casual restaurant. Check the agenda for the bus schedule.
 - ❑ One ticket is included with your registration
 - ❑ You can buy additional tickets at the registration desk
 - ❑ If you don't plan to attend, please turn in your ticket at the registration desk so someone else can use it to attend.
 - ❑ Driving instructions to the Flaming Pit are available at the registration desk.

Reminders

- ❑ If you are giving a talk, please have your computer connected or presentation loaded **BEFORE** the session begins
- ❑ Poster supplies are available at the registration desk. Posters go up anywhere on the numbered poster wall (see map). We'll remove posters at noon on Wed. if you have not already done so.
- ❑ Wireless access info is in your badge holder. Do not share your password. The registration desk has instructions.
- ❑ If you make cab/shuttle arrangements to be picked up from NIST, please be aware that cabs/shuttles will no longer be allowed past the NIST main gate. Please allow 10 minutes to walk to the NIST main gate to meet your cab/shuttle.
- ❑ If the registration desk is not staffed, there is a phone there with a number to call for help.