

# TREC Video Retrieval Evaluation

## TRECVID 2015

Paul Over<sup>^</sup>

George Awad<sup>#</sup>

Ian Soboroff<sup>\*</sup>

Angela Ellis<sup>\*</sup>

Darrin Dimmick<sup>\*</sup>

Alan Smeaton (Dublin City University)

Wessel Kraaij (TNO, Radboud University Nijmegen)

Georges Quénot (Laboratoire d'Informatique de Grenoble)

Roeland Ordelman (University of Twente)

Jonathan Fiscus<sup>\*\*</sup>

David Joy<sup>\*\*</sup>

Martial Michel<sup>\*\*</sup>

Stephanie Strassel<sup>+</sup>

Xuansong Li<sup>+</sup> et al

\* Retrieval Group / \*\* Multimodal Information Group  
Information Access Division  
Information Technology Laboratory  
NIST

+ Linguistic Data Consortium

# Dakota Consulting, Inc  
Silver Spring, MD

<sup>^</sup> Retired

# 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

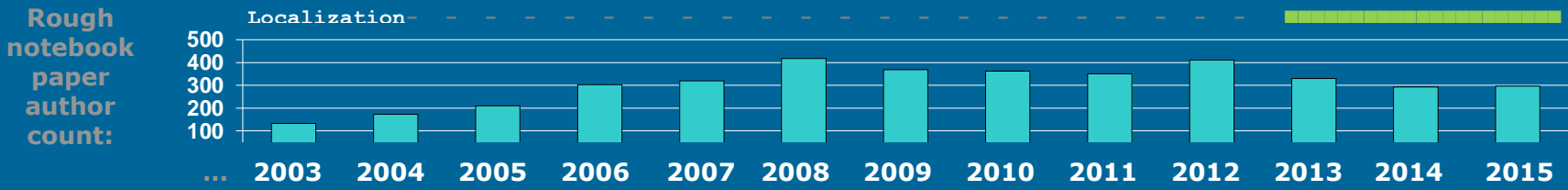
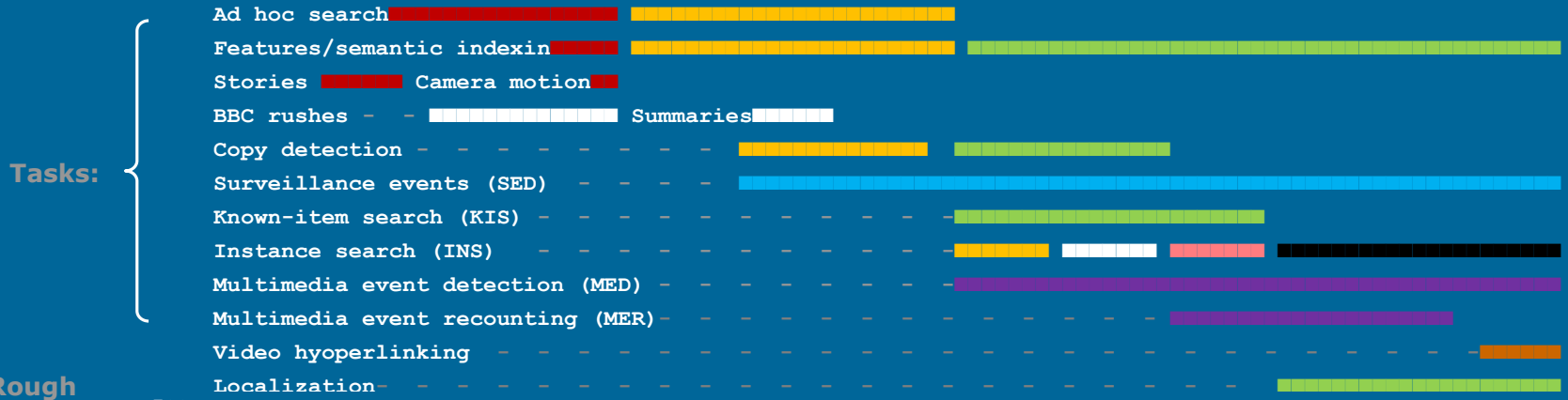
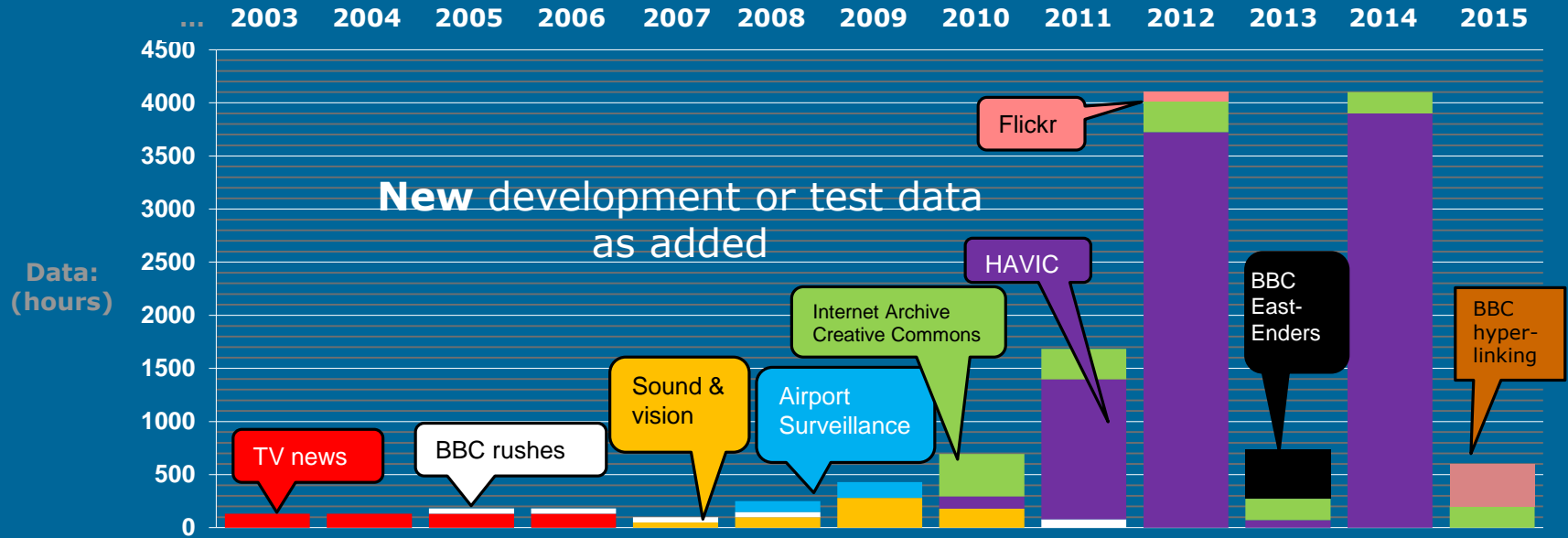
- search / detection / summarization / segmentation / ...

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 2015 Tasks and Data

<p><b>Internet Archive – Creative Commons (IACC)</b></p> <p><i>200 h test data, video, title, keywords, description</i></p> <p><i>687 hours dev video, metadata</i></p>	<p><b>BBC EastEnders</b></p> <p><i>464 h divided into 471527 shots</i></p>	<p><b>BBC Video Hyperlink</b></p> <p><i>c. 3000 h mixed BBC programming</i></p>	<p><b>Airport surveillance</b></p> <p><i>50 h test video</i></p> <p><i>100 h dev video</i></p>	<p><b>HAVIC - Internet multimedia</b></p> <p><i>7580 h, test video</i></p> <p><i>2116 h, dev video</i></p>
<p><b>Semantic indexing</b> (60 known test concepts submitted; 30 evaluated)</p>	<p><b>Instance search</b> (30 ad hoc image &amp; video test queries)</p>	<p><b>Video Hyperlinking</b> (135 test anchors)</p>	<p><b>Surveillance event detection (interactive)</b> (7 known test events)</p>	<p><b>Multimedia event detection</b> (20 pre-specified &amp;/or 10 ad hoc complex test events)</p>
<p><b>Localization</b> (10 known test concepts)</p>				

# TV2015 Finishers (46 teams)

PicSOM	---	***	LOC	***	---	SIN	Aalto U., U. of Helsinki
BUPT_MCPRL	INS	***	***	MED	SED	***	Beijing U. of Posts and Telecommunications
Mcis	---	---	---	MED	SED	---	Beijing Institute of Technology
ITI_CERTH	INS	***	---	MED	SED	SIN	Centre for Research and Technology Hellas
CUNI	---	LNK	---	---	---	---	Charles U. in Prague
CCNY	---	---	LOC	---	---	---	City College of New York; CUNY The Graduate Center
VIREO	***	LNK	---	***	---	***	City University of Hong Kong
VIREO-TNO	---	---	---	MED	---	---	City University of Hong Kong
CMU	---	LNK	***	MED	SED	SIN	CMU, CMU-Affiliates
DCU_ADAPT_LNK	---	LNK	---	---	---	---	Dublin City U. - ADAPT Research Center
insightdcu	INS	---	LOC	---	---	SIN	Dublin City U.; U. Polytechnica Barcelona
etter	---	---	---	MED	---	---	Etter Solutions LLC
EURECOM	---	LNK	---	---	---	SIN	EURECOM
FIU_UM	---	---	---	---	---	SIN	Florida International U.; U. of Miami
BigVid	---	---	---	MED	---	---	Fudan U.
ibm	---	---	---	---	SED	---	IBM
IRISA	---	LNK	---	---	---	---	IRISA Inria Rennes - Bretagne Atlantique
KoreaUnivISPL	---	---	---	MED	---	---	Korea U.; Intelligent Signal Processing Laboratory (ISPL)
IRIM	***	---	---	---	---	SIN	IRIM Consortium
LIG	---	---	***	***	---	SIN	Laboratoire d'Informatique de Grenoble
METU_EE	---	LNK	---	***	---	---	Middle East Technical U.
NII_Hitachi UIT	INS	***	***	MED	***	SIN	Natl. Inst. of Inf.(NII); Hitachi; U. of Inf. Tech.
NEU_MITLL	---	---	---	MED	---	---	Northeastern U.; MIT Lincoln Laboratory

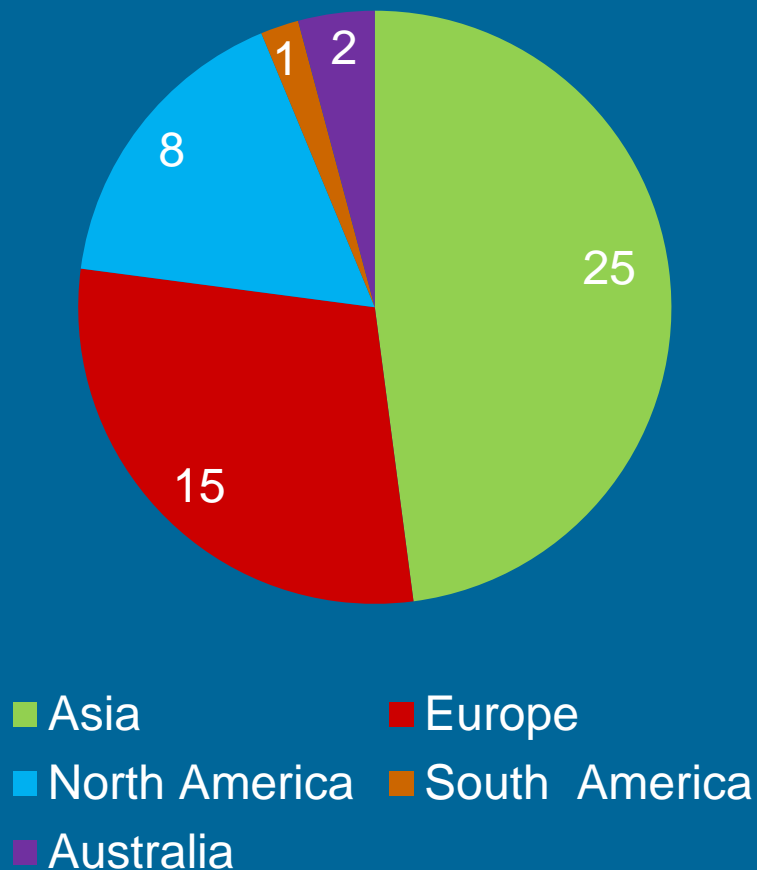
# TV2015 Finishers

nttfudan	---	---	---	MED	SED	---	NTT Media Intelligence Laboratories; Fudan U.
NTT	INS	---	---	---	---	---	NTT Comm. Science Lab.; NTT Media Intelligence Lab.
ORAND	INS	LNK	---	***	---	---	ORAND S.A. Chile
PKU_ICST	INS	***	***	***	***	***	Peking U.
BCMI.SJTU	---	---	---	MED	SED	---	Shanghai Jiao Tong U.
SeuGraph	---	---	---	***	SED	---	Southeast U. Jiulonghu Campus - Computer Graphics Lab
TUC	INS	---	---	---	---	---	Technische Universitaet Chemnitz
Trimps	INS	---	LOC	---	***	---	Third Research Inst. of the Ministry of Public Security
TJU_TJUT	***	***	***	***	SED	***	Tianjin U.; Tianjin U. of Technology
TokyoTech	***	***	LOC	MED	---	SIN	Tokyo Institute of Technology
Tsinghua_IMMG	INS	---	***	***	***	***	Tsinghua U.
TUZ	---	LNK	---	---	---	---	TUBITAK UZAY
MediaMill	***	***	LOC	MED	---	SIN	U. of Amsterdam Qualcomm
Sheffield_UETLahore	INS	***	---	---	---	---	U. of Sheffield, UK; U. of Eng. & Tech., Pakistan
siegen_kobe_nict	---	---	---	MED	---	SIN	U. of Siegen;Kobe U.; Natl.Inst. of Inf. and Comm. Tech.
UCF_CRCV	---	---	---	***	---	SIN	U. of Central Florida
UEC	---	***	***	MED	---	SIN	U. of Electro-Communications
UQMG	INS	---	---	***	***	***	U. of Queensland - DKE Group of ITEE
WARD	---	---	---	---	SED	---	U. of Queensland - School of Inf. Tech. & Elec. Eng.
Waseda	---	---	---	---	---	SIN	Waseda U.
IIP_WHU	---	LNK	---	---	SED	---	Wuhan U. - Intelligent Information Processing Lab
U_TK	INS	---	***	---	---	---	U. of Tokushima
NERCMS	INS	---	---	---	***	***	Wuhan U. - Natl. Eng. Research Center for Multimedia

# TV2015 Finishers

## Unique finishing teams

Groups Finished	Task code	Task name
11	SED	Surveillance event detection
15	SIN	Semantic indexing
14	INS	Instance search
16	MED	Multimedia event detection
10	LNK	Video hyperlinking
6	LOC	Localization



# Support

The running of TRECVID 2015 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**
  - shared coordination of the semantic indexing task
  - provided the master shot reference for the IACC.2 video
  - arranged for ASR for IACC.2 video
- Koichi Shinoda of the TokyoTechCanon team agreed to host a copy of the IACC.2 data
- The LIMSI Spoken Language Processing Group and VexSys Research provided ASR for the IACC.2 videos
- 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 and Robin Aly (Univ. of Twente, NL), Maria Eskevich and Benoit Huet (Eurecom, Fr), Gareth Jones and David Racca (DCU, Ir) Coordinated the Video hyperlinking task

# Agenda: Day 1

- Arranged by task
- Time for discussion of approaches & evaluation
- Monday
  - Intros, thanks, etc.
  - Semantic indexing
  - Concept localization
  - Lunch
  - Instance search
  - Workshop dinner

# Agenda: Day 2

- Tuesday
  - Multimedia event detection
  - Lunch
  - Video hyperlinking
  - Poster/demo boaster
  - Posters and demos with refreshments

# Agenda: Day 3

- Wednesday
  - Surveillance event detection
  - 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.