



xerox



1st International Workshop On Robust Reading

Singapore, 2 November 2014

In conjunction with ACCV 2014

Topics of Interest

Text vs object detection

Data-driven vs Model-driven approaches

From components to Solutions

Robustness across domains

Language agnostic?

The role of competitions

ICDAR Robust Reading Competition series

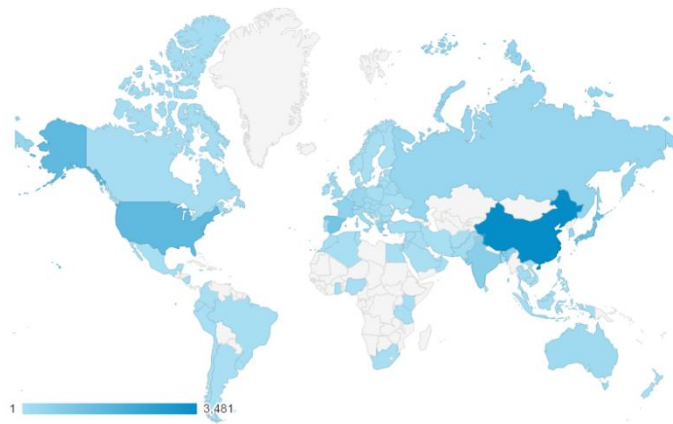
- **Continuous mode** competition
- **Datasets** are freely available
- **Online performance evaluation functionality**
- **Ranking charts and tables**
- **Visualisation** of the results of all tasks, and all challenges



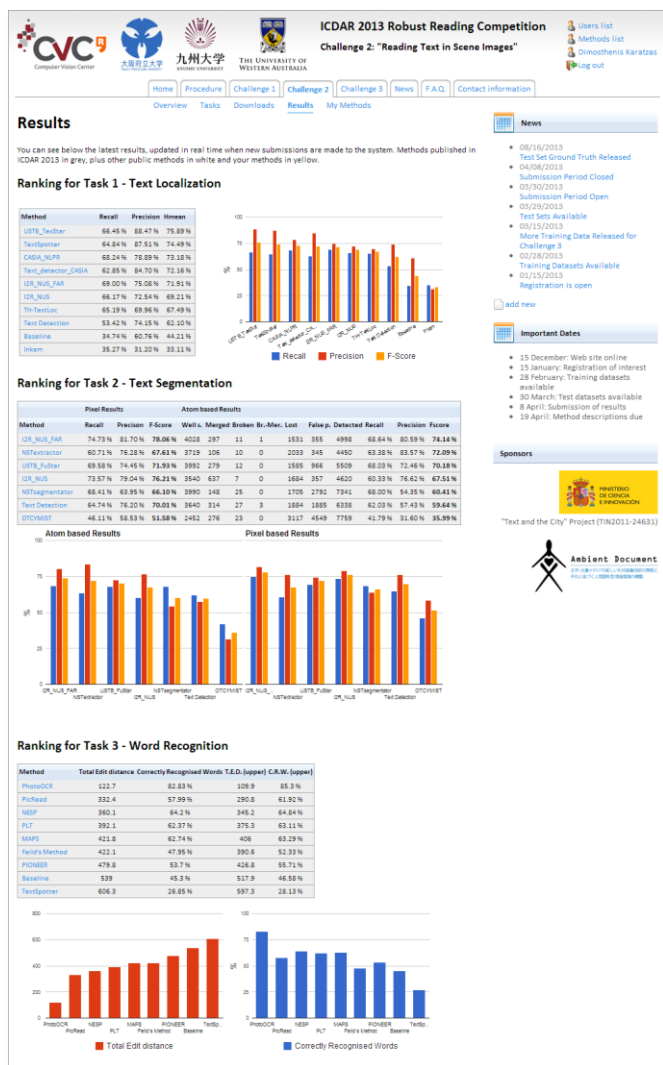
<http://dag.cvc.uab.es/icdar2013competition>

Participation in Numbers (2013 - today)

Web Site page views (Unique Visitors)	86,400 (4,559)
Registered Users	597
Private Submissions	2,134
Public Submissions	57
Challenge 1	21
Challenge 2	33
Challenge 3	2



Online Evaluation and Ranking Tables



Visualisation of different Tasks

Task 1 - Text Localization



Method comparison

Method	Recall	Precision	F-score
57 USTB_TexStar	94.44	93.33	93.89
126 TH-TextLoc	72.22	72.73	72.47
159 i2R_NUS_2	60	80	68.57
139 Saliency_Text	60	80	68.57
138 i2R_NUS	60	80	68.57
128 ZY_IACAS	55.56	57.14	56.34
117 ZY_IACAS	55.56	53.33	54.42
81 OTCYMIST	46.67	61.05	52.9

Task 3 - Word Recognition

method: PhotoOCR

images list

<p>correct words 1183 see all</p> <p>word 1111 gt: PROFESSIONAL detection luisa, edit dist. 12 normalised 1</p>	<p>word 1112 gt: PROFESSIONAL detection ilm edit dist. 11 normalised 0.92</p>
<p>word 437 gt: 440-824-3517 detection two-sensor edit dist. 11 normalised 0.92</p>	<p>word 878 gt: EXPERIENCES detection N-m edit dist. 10 normalised 0.91</p>
<p>word 434 gt: Spectacular detection Eceerlen edit dist. 9 normalised 0.82</p>	<p>word 1130 gt: Deadline! detection case edit dist. 8 normalised 0.89</p>
<p>word 877 gt: HHONORSÅ detection -No. edit dist. 8 normalised 0.89</p>	<p>word 211 gt: CLUBCARD detection Guecwv edit dist. 7 normalised 1</p>

Task 2 - Text Segmentation



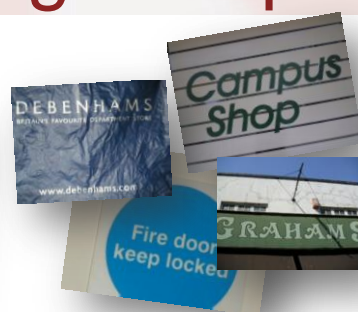
Method comparison

Method	Pixel Results			Atom Based Results									
	Recall	Precision	FScore	Well seg	Merged	Broken	Br. Merg	Lost	False P.	Det. Atoms	Recall	Precision	FScore
USTB_TexStar	82.46	90.54	86.31	62	12	0	0	4	0	69	79.49	89.86	84.35
OTCYMIST	95.13	78.02	85.73	35	20	0	0	23	4	53	44.87	66.04	53.44
Saliency_Text	94.26	74.86	83.44	24	37	0	0	17	6	44	30.77	54.55	39.34
i2R_NUS_W	94.61	74.61	83.43	27	37	0	0	14	14	55	34.62	49.09	40.6
i2R_NUS	94.61	74.61	83.43	27	37	0	0	14	14	55	34.62	49.09	40.6
text_localization_v1	64.9	85.3	73.71	19	22	0	0	37	1	37	24.36	51.35	33.04

The ICDAR Robust Reading Competitions



Challenge 1:
Born-Digital



Challenge 2:
Scene Images



Challenge 3:
Videos

Tasks

Localisation	2011 / 2013 / <u>2015</u>	2011 / 2013	2013 / <u>2015</u>
Segmentation	2011 / 2013 / <u>2015</u>	2013	
Recognition	2011 / 2013 / <u>2015</u>	2013	
Word Spotting	<u>2015</u>	<u>2015</u>	
End-to-end	<u>2015</u>	<u>2015</u>	

BEST PAPER AWARD

Best Paper Award Winner

“Perspective Scene Text Recognition with
Feature Compression and Ranking”

Yu Zhou, Shuang Liu, Yongzheng Zhang,
Yipeng Wang, Weiyao Lin

Chinese Academy of Sciences

THANK YOU FOR ATTENDING