

# Supplementary Materials

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## I. PERFORMANCE EVALUATION ON SCREEN CONTENT IMAGES

It is interesting to see how our method performs on other types of images such as screen content images. Thus, we also conducted the performance evaluation of the proposed method on the SIQAD [1], a screen content image dataset. Table I summarizes the characteristics of SIQAD. We select SSRM [2], EFS [3], FSIM [4], SSIM [5] and PSNR for comparison. The results are listed in Table II. From the table we can see that all the compared methods did not perform well on SIQAD, and the proposed method outperformed all compared methods except SSRM.

The performance of all compared methods on the SIQAD dataset is not as good as that on the natural image datasets. This is not surprising, as all the compared methods are designed for or trained on natural images. Particularly, screen content images have noticeably different characteristics from natural images, *e.g.* a screen content image contain texts, graphics and photo together, which is different from natural scenes. See Fig. 1 for two sample images from the SIQAD dataset. Such different characteristics make it hard that a metric designed for natural images can adapt to the screen content images.

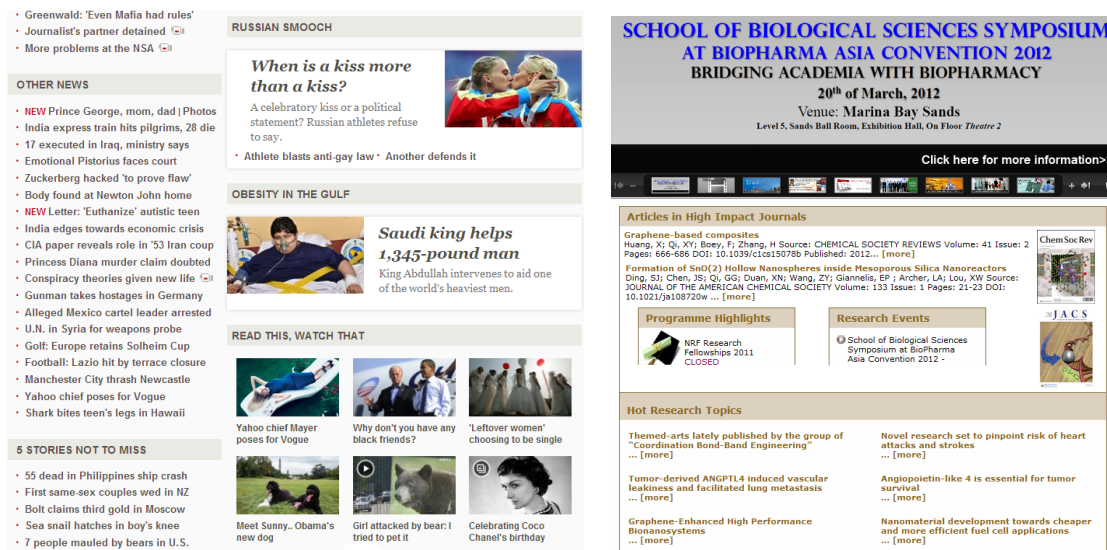


Fig. 1: Two sample images in SIQAD dataset

TABLE I: Characteristics of SIQAD dataset.

# Reference Images	# Distortion Images	# Distortion Types	Distortion Levels per Distortion Type
20	980	7	7

TABLE II: Performance comparisons on SIQAD dataset.

Criteria	OURS	EFS	SSRM	PSNR	SSIM	FSIM
PLCC	0.6007	0.5154	0.6745	0.5869	0.5912	0.5902
SROCC	0.6046	0.4908	0.6589	0.5604	0.5836	0.5819
KROCC	0.4438	0.3521	0.4908	0.4257	0.4235	0.425
RMSE	11.443	12.266	10.568	11.589	11.545	11.555
MAE	8.7746	9.6982	8.2029	9.0393	9.0934	9.0116

## REFERENCES

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