

Summary of Changes in Response to Reviewers' Suggestions

Title: All reviewers thought the title of the paper was misleading. We changed it to better describe the actual content, and accordingly refer to “shape” throughout to emphasize the fact that we are dealing with 2d objects.

Generalizability: As requested, this issue is discussed more extensively (in the introduction, section 5A and the discussion), both in terms of the coarse-to-fine strategy and the local features.

Key words: We have added key words in the abstract.

- **Reviewer 1:**

1. The notion of invariance is clarified in the introduction.
2. Section II on related work has been divided into subjects.
3. Regarding a baseline experiment, we really have no way of deciding what that would be. However, we would be willing to make the database of plate images available to others in order to try other methods.
4. We have added more images together with the resulting detections in Figure 10.
5. The edges are quite robust to photometric variations because they are based on direct comparisons of absolute intensity differences.

- **Reviewer 2:**

1. We have added the correct reference to Torralba and a reference to the shape context literature (Belongie et al).
2. Our use of “context” in the sense of structural constraints on the relative placement of the shapes in the image is clarified in the introduction.
3. The figures have been labeled more precisely and the references in the text to the figures are more accurate.
4. The overall approach definitely extends beyond text; for instance, we have previously implemented it for detecting faces and reference that and other previous work.
5. We have provided more detail on how the plate subimage is detected and how the prototypes are clustered.

6. We have made section VIII,B clearer and added a figure describing the recursive algorithm involved in the CTF search.
 7. The meaning of type I and type II errors is clarified; we mainly use missed detections and false positives as suggested.
 8. CTF search has not been previously implemented for multiple pose parameters and multiple object classes.
- **Reviewer 3:** Suggestions are accommodated as described above.