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# Combined local and global descriptors for low bitrate image retrieval.

The invention introduces a method for providing compact descriptors for visual search, in which local image features are extracted and a global image signature is formed from these local descriptors. Global features may be much smaller than local features. The local signatures are compressed using the embedded form that may be best suited for the target bit rate. The location meta-data of the local descriptors can also be compressed by using location coding. In some embodiments a complete query is formed by starting with the global signature and filling the rest of the target rate with the compressed local descriptors. This method may provide good performance at a wide range of bit rates, and may maintain compatibility between queries of different rates. In other words, the global descriptor is included and the rest of the possibly available budget is filled with local descriptors.

## Applications

- Image retrieval over a network
- Compact storage

## Advantages

- Combining very low bit rate global descriptors and low rate local descriptors enables robust image retrieval with state of the art performance.

## Patents

- Published Application: 20130129223
- Published Application: WO2013076364
- Issued: 9,514,380 (USA)

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