Part F

Analysis of Online Data

We have now been discussing the analysis of static documents – mostly images of scanned documents – for several hundred pages. But what about documents which are dynamically created, that is, data for which we have not only the final result of a document image or representation, but also information about the way it was drafted, written, created? In this part, we will discuss the extension of document analysis and recognition to such online data.

The most immediate application, known to many users since it has become standard practice on tablets and smart phones, is that of the recognition of online handwriting. How can the full set of information about the way the writing was done help in the recognition of free or constrained text written by hand? Jin Hyung Kim and Bong-Kee Sin address this topic in ▸Chap. 26 (Online Handwriting Recognition).

A specific problem with strong requirements for reliability is that of online signature verification, as Réjean Plamondon, Donato Impedovo, and Giuseppe Pirlo explain in ▸Chap. 27 (Online Signature Verification).

But it is not only text which can be drawn by hand. Sketches, drawings, diagrams, etc., can be drafted on a tablet or some other interactive device; the question is then how good interfaces and efficient recognition software can interpret the user's intention and convert it into clean, precise, and structured graphical primitives. Liu Wenyin and Tong Lu have more on that in ▸Chap. 28 (Sketching Interfaces).