

ACOUSTICS2008/1113 Voicing documentation of a pipe organ

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The paper begins with a brief presentation on the Parisian organ landscape, and then focuses on sound documentation of the historical organ of Sainte Elisabeth (Suret 1853, 3 keyboards and pedal, 40 stops, about 2500 pipes). Calibrated recordings of all the notes have been performed inside and outside the organ case, using several microphone positions. The methodology proposed by Pollard (J. Acoust. Soc. Am. 106 (1), July 1999, 360-370) is extended and applied to sound analysis for all the notes of the instrument. The analogies between the proposed sound description (or "voicing quality", described in terms of sharpness, loudness, tristimulus coordinates, transient building and spectral centre of gravity) and human voice quality description are discussed. Both voicing of individual pipes and voicing of the instrument are analysed. "Voicing of the instrument" means voicing variations of the pipes for different notes or registers of a same stop, for different stops of a same division, and for different divisions of the instrument. This methodology may be applied to documentation and characterisation of the 'style' of the instrument in terms of its acoustic signature, provided additional information on recording conditions and room acoustics are available.