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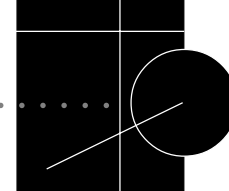
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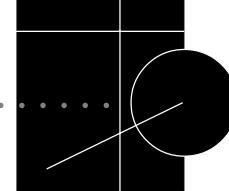
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- Remote sensing—Applications**
- Remote Sensing and GIS for Hazards: Foreword [PE&RS Special Issue]. Michael E. Hodgson and Bruce A. Davis. October: 976.
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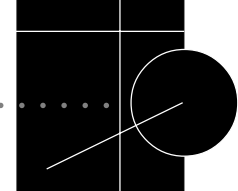
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