Summary Document

Title: Levels of Exploration in Exploratory Testing: From Freestyle to Fully Scripted
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Exploratory Testing (ET) is commonly perceived as a flexible alternative to scripted testing, yet lacks a defined structure that supports varying degrees of tester freedom. This paper addresses this gap by proposing a classification of ET into **five levels of exploration**, ranging from freestyle to fully scripted testing. These levels are defined based on the detail provided in test charters, with less detailed charters enabling freer exploration and more detailed charters constraining tester behavior. Motivated by the need to balance exploratory freedom with reproducibility and structure, the approach builds on principles from **Session Based Test Management (SBTM)** and aims to support testers in choosing the appropriate level of exploration for their specific testing context.

The classification aims to guide practitioners in determining how much freedom or structure should be applied during testing activities. This offers a practical framework for aligning testing goals—such as defect discovery, learning, or verifying conformance—with the degree of exploration allowed. The novelty of this approach lies in its formalization of exploratory testing as a continuum, moving beyond the traditional dichotomy of exploratory versus scripted testing. By defining clear levels and corresponding test charter templates, the classification makes exploratory testing more systematic and accessible for practitioners.

The validation of this classification was conducted through **focus groups at four companies** (Sony Mobile, Axis Communications, Ericsson, Softhouse Consulting) involving 20 experienced testers. Participants applied the classification to rewrite test cases at different exploration levels and discussed its relevance and usability. The evaluation highlighted advantages of higher exploration levels in terms of defect detection, flexibility, and tester engagement, while lower levels were preferred for traceability and verifying conformance requirements. The study concluded that combining various exploration levels based on context can optimize testing outcomes and address the limitations of relying solely on either exploratory or scripted approaches.