Graphics Device Tabular Output

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R has provided users with powerful graphic capabilities to produce sophisticated, aesthetically pleasing plots that meet the high standards in today's scientific reporting. However, *R* has lacked the ability to create quality tabular output within the *R* environment. Most users who produce quality tabular output rely on the typesetting system *LaTeX*. This may deter some new users from further exploring the dynamic language supported by *R*'s environment.

The gap between *R*'s graphical capabilities and its inability to produce tabular output is the underlying motivation to create a function, utilizing the **gridBase** library, to produce high-level tabular output completely within the *R* environment. The proposed tabular function provides a granular level of control by looping through a data frame and printing every element one-by-one to the graphics device. In addition, the user is able to add additional formatting through parameter declaration and defined escape characters.

Some highlights of its functionality are:

- Column, Row, Title, Subtitle Labeling
- Apply additional formatting to grouped row and column label hierarchies
- Add vertical and horizontal dividers (lines)
- Row highlighting
- Footer
- Foot Notes
- Page overflow management as well as page number (designed for long PDF reports)

The proposed tabular function can also be utilized to create wrappers to *R* functions that produce a high volume of text to the *R* console, such as the `lm` function. This wrapper captures the summary statistics, organizes them into a presentable format, and displays the tables adjacent to the model diagnostic plots.

This function should be easy to implement for any user who is familiar with calling an *R* function, while also providing the expert with additional flexibility to present high quality tabular output in any format supported by the *R* graphics device. There is a desire to further develop the logic used in this function so that its application may span different needs to present tabular output in *R*.