Rough Introduction to expandparams ver 0.02

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2014/10/7

1 Usage of \expandparams and \prexp

When you want to expand parameters before the main control sequence is expanded, \expandparams makes you save the cost writing thousants of \expandafter. For example, let \csone, \cstwo and \separatetokens be defined by below:

code

```
\def\csone{JK}%
\def\cstwo{\csone F}%
\newcommand{\separatetokens}[3]{%
  \@tfor\ch:=#1\do{[\ch]}%
  \@tfor\ch:=#2\do{(\ch)}%
  \@tfor\ch:=#3\do{\{\ch\}}%
}%
```

When you want to expand \csone and \cstwo before \separatetokens is expanded, you can use \prexp and write

code

```
\expandparams{\separatetokens\prexp{\csone V}{CD}\prexp{\cstwo W}}
```

instead of

code

```
\expandafter\expandafter\expandafter\separatetokens%
\expandafter\expandafter\expandafter%
{\expandafter\csone\expandafter V\expandafter}\expandafter%
{\expandafter C\expandafter D\expandafter}\expandafter{\cstwo W}
```

to gain [J][K][V](C)(D){JK}{F}{W}. Similarly, when you want to expand \cstwo *twice* before \separatetokens is expanded, you can use double \prexp and write

code

```
\expandparams{\separatetokens{AB}{CD}\prexp\prexp{\cstwo W}}
```

instead of

code

```
\expandafter\expandafter\expandafter\separatetokens%
\expandafter\expandafter\expandafter{\expandafter\expandafter\expandafter A%
\expandafter\expandafter\expandafter B\expandafter\expandafter\expandafter}%
\expandafter\expandafter\expandafter{\expandafter\expandafter\expandafter C%
\expandafter\expandafter\expandafter D\expandafter\expandafter\expandafter}%
\expandafter\expandafter\expandafter{\cstwo W}
```

to gain [A][B](C)(D){J}{K}{F}{W}. Indeed the results of these two ways coincide with each other:

Using `\expandafter`:	[A][B](C)(D){J}{K}{F}{W}
Using `\expandparams`:	[A][B](C)(D){J}{K}{F}{W}

2 Small Experiments

`expandparams` contains other commands than `\expandparams` and `\prexp`. Those are `\inserttoken`, `\deletetoken`, `\gettoken` and `\expandtokenlist`, which enables us to deal more easily with token lists.
LJKM; [L][JK][M]
XLJKM; [X][L][JK][M]
XLYJKM; [X][L][Y][JK][M]
XLYJKMJK; [X][L][Y][JK][M][JK]
XYJKMJK; [X][Y][JK][M][JK]
XYMJK; [X][Y][M][JK]
0: X; [X]
1: Y; [Y]
2: M; [M]
3: JK; [JK]
XYDEMJK; [X][Y][DE][M][JK]
2: DE; [DE]
XDEMJK; [X][DE][M][JK]
XUVDEMJK; [X][U][V][DE][M][JK]
X; [X]
Ordinary: [JK][R]
Using `\expandparams`: [J][K][R]
Ordinary: [JKF][S]
Using `\expandparams`: [JK][F][S]
Ordinary: [PQ][A]

Using `\expandparams`: [PQ][A]
Ordinary: [A][B](JK)(W)
Using `\expandparams`: [A][B](J)(K)(W)
Ordinary: [JKF](JK)(W)
Using `\expandparams`: [JK][F](J)(K)(W)
Ordinary: [JKF]
Using `\expandparams`: [J][K][F]