

## 2 Types of Initiatives and Dialog Flows

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Using the control described above, various forms of initiatives can be developed, some examples are provided  
5 below:

### 2.1 Mixed initiative Dialogs

Mixed initiative dialogs provide the capability of accepting input for multiple controls with the asking of a single question. For example, the answer to the question  
10 "what are your travel plans" may provide values for an origin city textbox control, a destination city textbox control and a calendar control ("Fly from Puyallup to Yakima on September 30<sup>th</sup>").

15 A robust way to encode mixed initiative dialogs is to handwrite the mixed initiative grammar and relevant binding statements, and apply these to a single control.

The following example shows a single page used for a simple  
20 mixed initiative voice interaction about travel. The first QA control specifies the mixed initiative grammar and binding, and a relevant prompt asking for two items. The second and third QA controls are not mixed initiative, and so bind directly to their respective primary control by  
25 default (so no bind statements are required). The RunSpeech algorithm will select the QA controls based on an attribute "SpeechIndex" and whether or not their primary controls hold valid values.

```
30 <%@ Page language="c#" AutoEventWireup="false"
    inherits="SDN.Page" %>
```