Dialogue Management in Type Theory
(a teaser)

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GF Summer School, 25 August 2009
Let’s start with a movie...

“The Famous Pizza Demo”

http://www.cs.chalmers.se/~bringert/xv/pizza/pizza-movie-large.html

This dialogue system is specified in GF.

The grammar is automatically translated into VoiceXML.
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abstract Pizza

cat
Number; Size; Topping; Order

fun
pizza : Number → Size → Topping → Order
one, two : Number
small, large : Size
ham, cheese : Topping
Concrete syntax

concrete PizzaEng of Pizza

printname
Order = “What would you like to order?”
Size = “What size pizzas do you want?”
Topping = “What topping do you want?”

lin
pizza n s t = \{s = n.s ++ (s.s | []) ++ pizzaN ! n.n ++ (“with” ++ t.s | [])\}
one = \{s = “one”; n = Sg\}
small = \{s = “small”\}
ham = \{s = “ham”\}

oper
pizzaN = table \{Sg \Rightarrow “pizza”; Pl \Rightarrow “pizzas”\}
The Pizza Demo has a very simple dialogue model – similar to a web form:

**Pizza Order Form**

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<th>User Answer</th>
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