



WHOLE

Systems

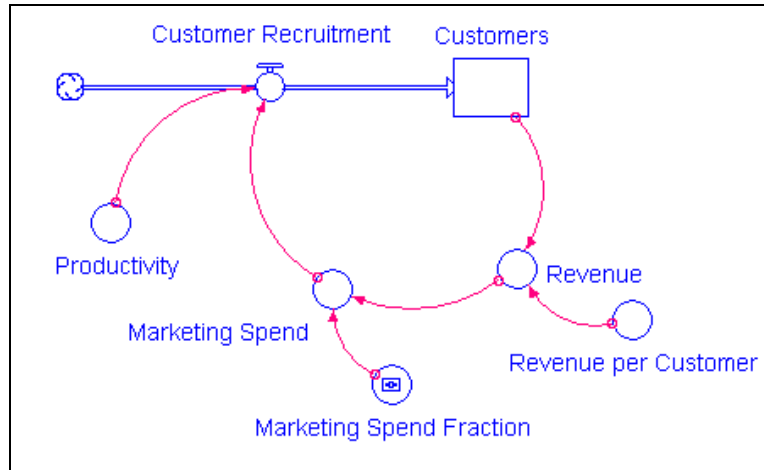
Partnership

Customer Acquisition Dynamics

*“Getting Started with STELLA and iThink” Workshop
International System Dynamics Conference
July 27, 2006*

Presented by:
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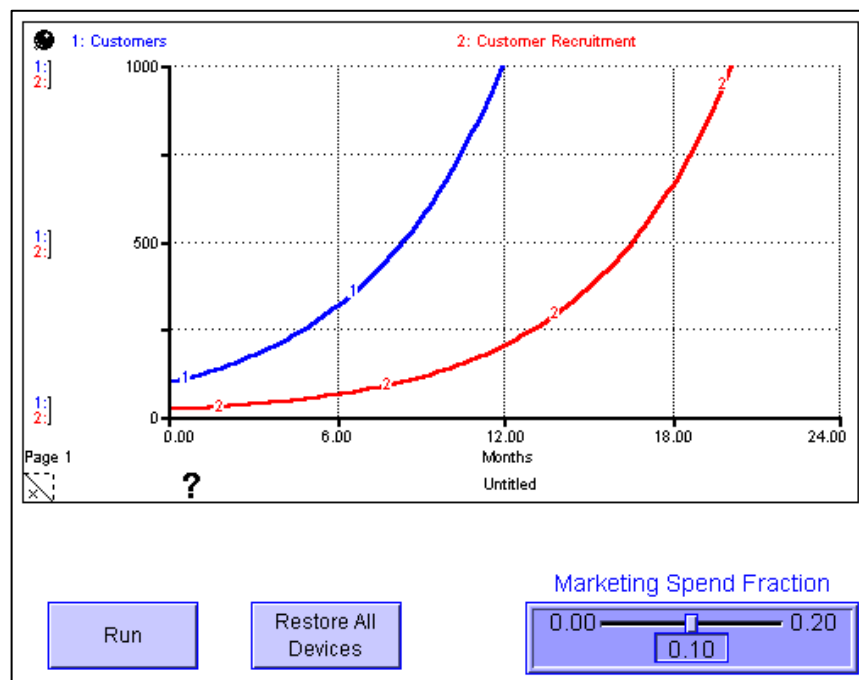
Customer Model 1 (Reinforcing Loop)



$Customers(t) = Customers(t - dt) + (Customer_Recruitment) * dt$
 INIT Customers = 100

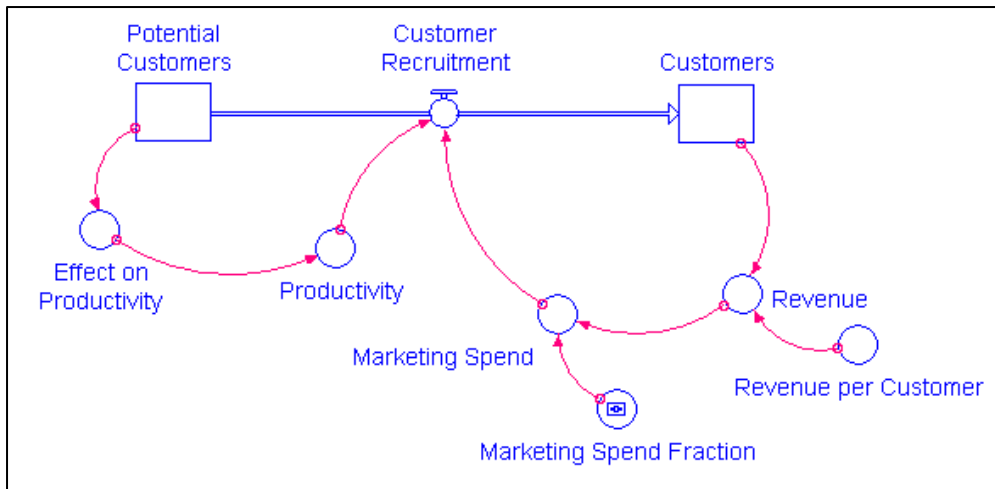
INFLOWS:

$Customer_Recruitment = Marketing_Spend * Productivity$
 $Marketing_Spend = Revenue * Marketing_Spend_Fraction$
 $Marketing_Spend_Fraction = 0.08$
 $Productivity = 0.05$
 $Revenue = Customers * Revenue_per_Customer$
 $Revenue_per_Customer = 50$



Customer Model 3

(Introducing a Market Saturation Effect)



Customers(t) = Customers(t - dt) + (Customer__Recruitment) * dt
 INIT Customers = 100

INFLOWS:

Customer__Recruitment = Marketing_Spend*Productivity

Potential__Customers(t) = Potential__Customers(t - dt) + (- Customer__Recruitment) * dt

INIT Potential__Customers = 900

OUTFLOWS:

Customer__Recruitment = Marketing_Spend*Productivity

Effect_on__Productivity = Potential__Customers/INIT(Potential__Customers)

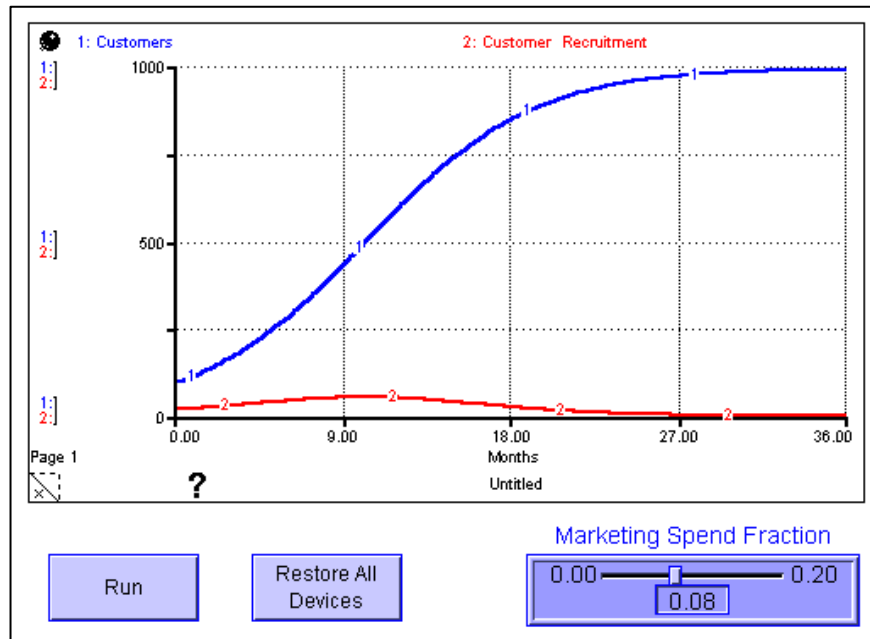
Marketing_Spend = Revenue*Marketing_Spend_Fraction

Marketing_Spend_Fraction = 0.08

Productivity = 0.05*Effect_on__Productivity

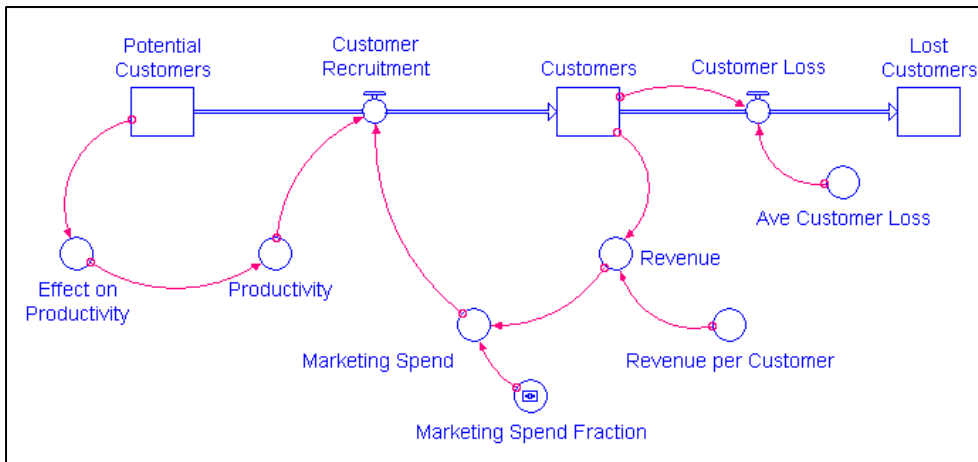
Revenue = Customers*Revenue_per_Customer

Revenue_per_Customer = 50



Customer Model 4

(Introducing another loop - Customer Loss)



$Customers(t) = Customers(t - dt) + (Customer_Recruitment - Customer_Loss) * dt$

INIT Customers = 100

INFLOWS:

$Customer_Recruitment = Marketing_Spend * Productivity$

OUTFLOWS:

Customer_Loss = Customers * Ave_Customer_Loss

$Lost_Customers(t) = Lost_Customers(t - dt) + (Customer_Loss) * dt$

INIT Lost_Customers = 0

INFLOWS:

$Customer_Loss = Customers * Ave_Customer_Loss$

$Potential_Customers(t) = Potential_Customers(t - dt) + (- Customer_Recruitment) * dt$

INIT Potential_Customers = 900

OUTFLOWS:

$Customer_Recruitment = Marketing_Spend * Productivity$

Ave_Customer_Loss = 0.05

$Effect_on_Productivity = Potential_Customers / INIT(Potential_Customers)$

$Marketing_Spend = Revenue * Marketing_Spend_Fraction$

Marketing_Spend_Fraction = 0.08

$Productivity = 0.05 * Effect_on_Productivity$

$Revenue = Customers * Revenue_per_Customer$

Revenue_per_Customer = 50

