

Gama Network Presents:

Gamasutra.com

The Full Spectrum Warrior Camera System

(Full Spectrum Warrior)

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Gamasutra

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URL: http://www.gamasutra.com/features/20040326/fdaglow_01.shtml

가 . ,
가
(window) . ,
,
. Full Spectrum Warrior (FSW)가 ,
, 가
. ,
FSW
,
. , 가
, FSW "autolook"
. , - -

· , ,
· ,
FSW

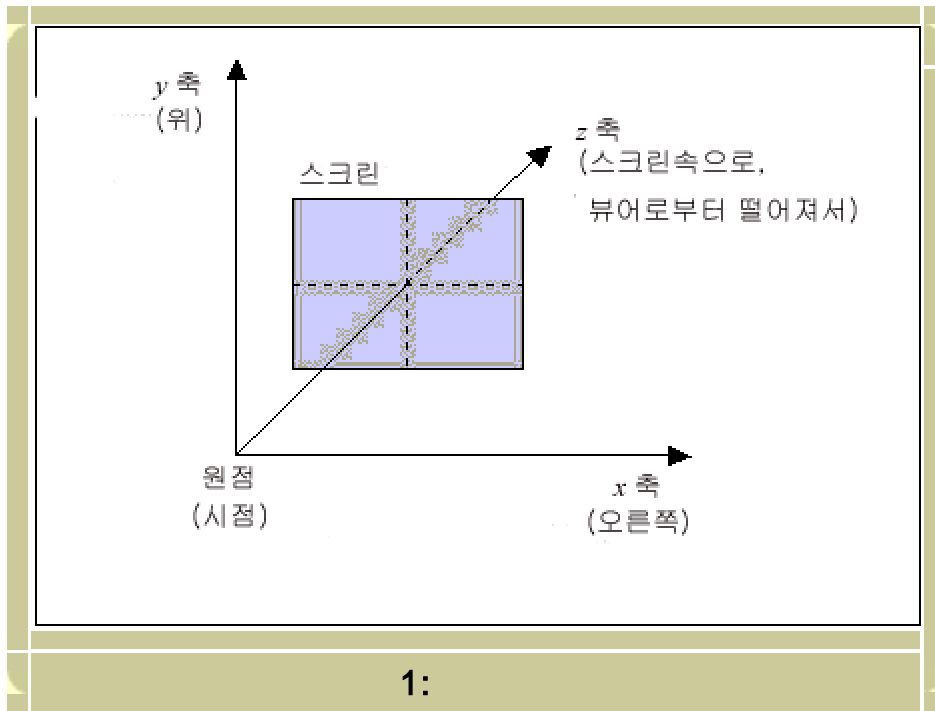
FSW

FSW , 4 ,
(primary) (가)
· Y · 가
(fly-by) , 가
가 가

(fly-by)

· ,
가)
D- (mini-fly-by,
)

FSW 가 ,
(in-game view)
가 , 가



- x -축, y -축, z -축
- z -축 (pan, tilt) 가 x -축, y -축
- z -축 (quaternion) (interpolation) 4 (quaternion) interpolation) *FSW*

(target point)

(target point)

가

가

PC(Proportional Controller,)

PC

, PC(

)

$$V = C(P_t - P)$$

, V

(velocity vector), C

(proportion), P

, P_t

$$V = C(P_1 - P)$$

PC

(simplicity)

, PC

. P()

Pt()

(exponential decay)

0()

가

PC " (graceful)"

PC 가

가

, 가

1. " (exit)"가

. Pt(

)가

(

), PC

2. P() . ,
 PC 가 .
 (equation) (equation)

$$Lag = |P_1 - P| = |V| / C$$

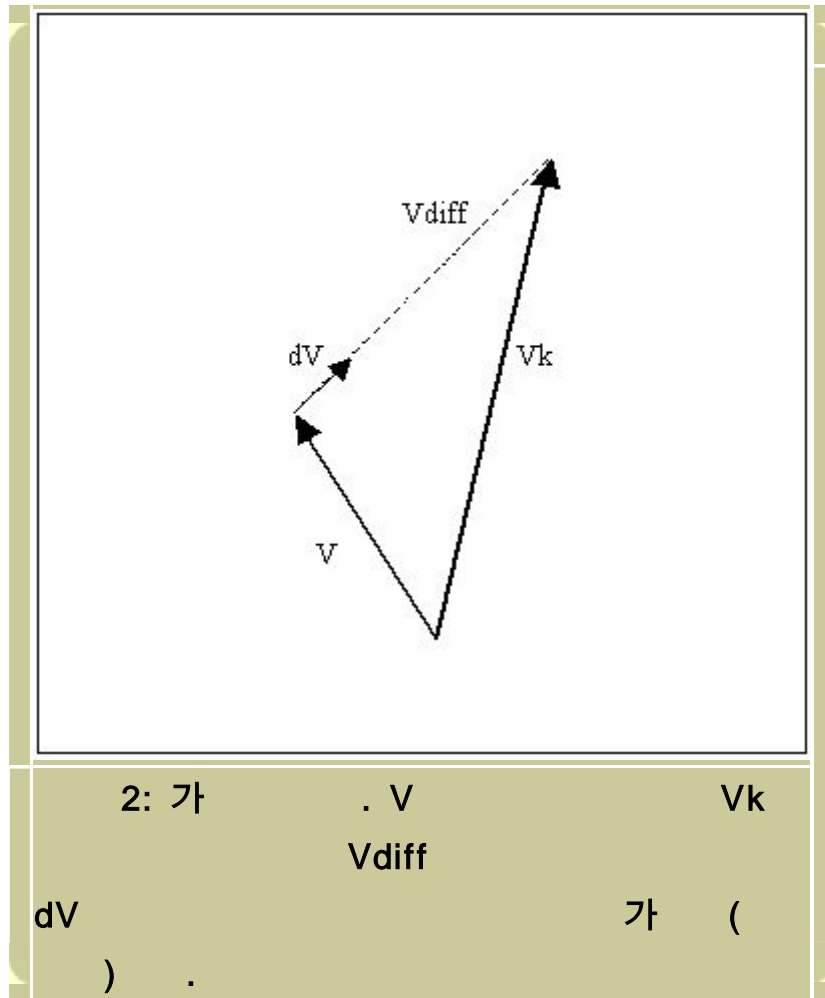
가 가 . PC 가
 " (arrival)" ,
 가 가 . PC 가
 ,
 ((exit characteristic)
).

MPC(The Modified Proportional Controller,)

PC(proportional controller) , *FSW*
(modified proportional controller,

MPC) . MPC PC 가

가 . P 가



V V_k 가 ,

$$V_{diff} = V_k - V$$

Alim 가 (가) 가 .

$$dV_{max} = A_{jim} * dt$$

, dV_{max} V_{diff} .

if ($|V_{diff}| < dV_{max}$)

$$dV = V_{diff}$$

else

$$dV = dV_{max} V_{diff} / |V_{diff}|$$

, dV

$$V^1 = V + dV$$

(Lag)

Vt()

가

(Lag)

$$V_k = C(P_1 - P) + V_1$$

Vk() 가

(pan)

(tilt)

(parameteriz)

MPC 1

(one-dimensional version)

(Target points)

MPC 가

, MPC 가

가

(moving point)

(fly)

가 () ,

가 (overshoot)

(가 " "

) 가 " "

가 " "

가 .

(overshot) .

MPC

가

가

가 " (smart)"

FSW

MPC

가

가

MPC

FSW

가 가

가

가

PC

MPC

MPC

가
FSW 가 " (lag behind)"

FSW "Autolook"

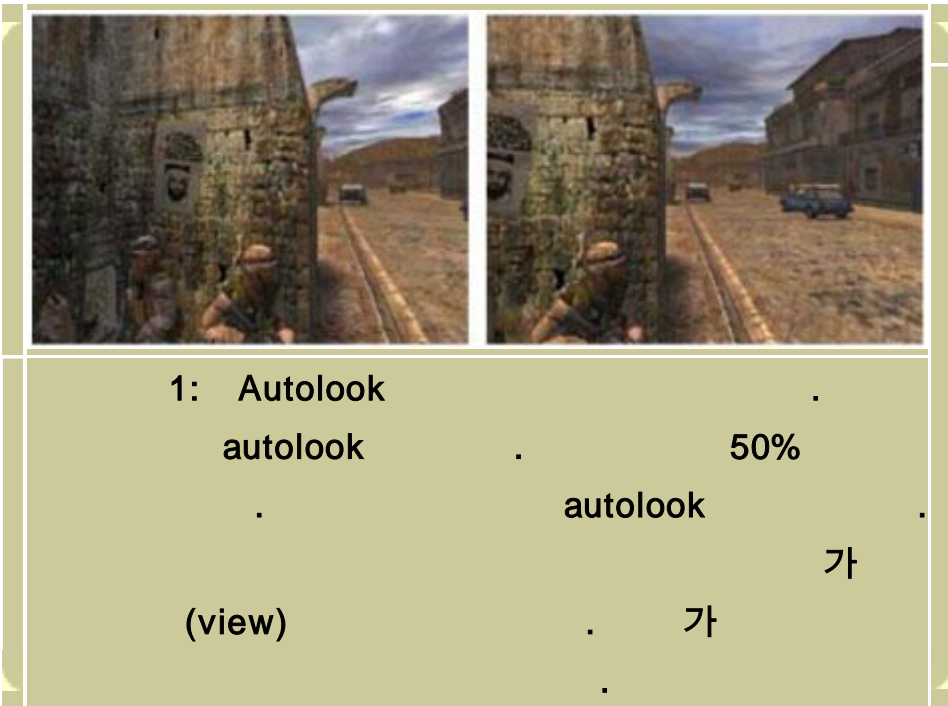
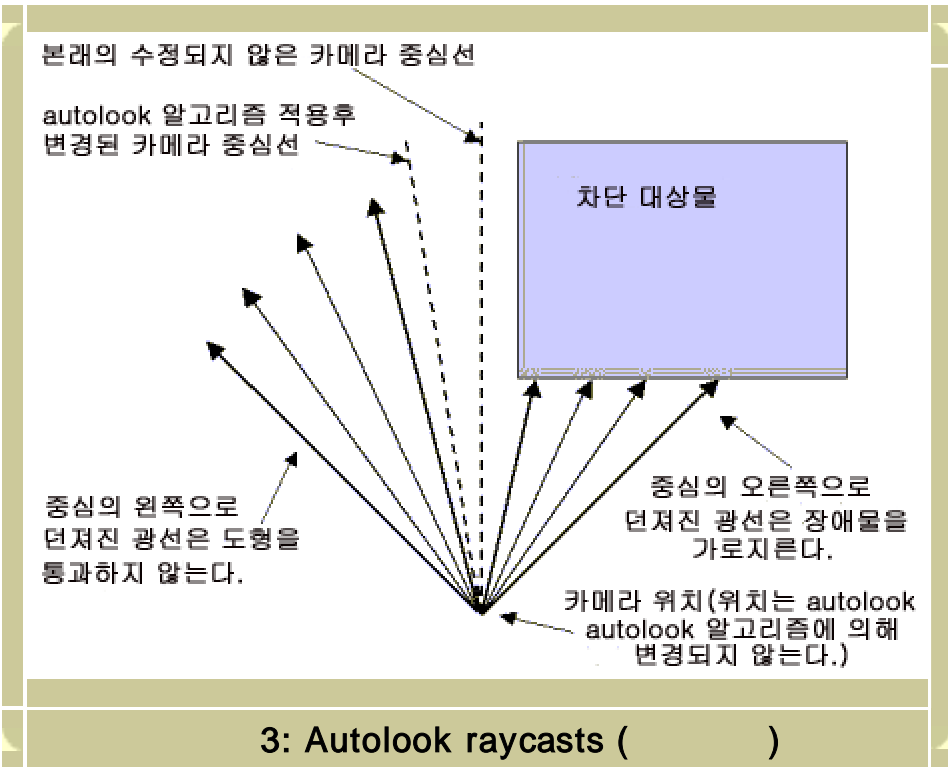
Autolook FSW
3 (third-person)
(: FSW
)

가 (view)
(FOV) 50% 가

Autolook 가
(y)
, 가 (weighting factor,
)가 (angular) ()
().
가

Autolook . Autolook

Autolook 가
가 FSW 가



(playtesting)

, autolook

FSW

?

, autolook
(view angle)

, *FSW*

(world-space reticle)

가 (view)

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