with $f_1 g_1 + \ldots + f_k g_k = 1$ on X. In fact one of the g_i's must be unbounded on the sequence $\{x_n\}$. As in the proof of theorem 1 we take $f \in O(Y)$ a non zero-divisor in $\mathcal{O}_{Y,x}$ for each $x \in Y$ and vanishing in the point y. By the inductive hypothesis $V(f) \cap X$ with its reduced structure is a Stein space. We define $W:= (V(f), \mathcal{O}_W)$ with

$$\mathcal{O}_W := \mathcal{O}_Y / f\, \mathcal{O}_{Y|V(f)}$$

and $Z := W_{|X \wedge W}$ is a Stein space, too. Let $p: O(X) \to O(Z)$ be the projection. From lemma 1 it follows that p is surjective. Let $h_1, \ldots, h_k$ be holomorphic functions on W such that y is their unique common zero. Since Z is a Stein space and $h_1, \ldots, h_k$ have no common zero in Z, there exist

$$g_1, \ldots, g_k \in O(Z)$$

such that we have $g_1 h_{1|Z} + \ldots + g_k h_{k|Z} = 1$ on Z. We take $G_i \in O(X)$ such that $p(G_i)$ is g_i. By the exact sequence (2) we obtain that there exists $G \in O(X)$ such that we have $Gf + \ldots + G_k h_k = 1$ on X. The proof is now finished. $\square$

REFERENCES

[1] BALLICO, E. A remark on a theorem by Fornaess and Narasimhan about the Levi problem. *Math. Ann.* (To appear).

[2] BERG, G. On 2-dimensional Cousin-I spaces. *Math. Ann. 248* (1980), 247-248.

[3] COEN, S. Annulation de la cohomologie a valeurs dans le faisceau structural et espaces de Stein. *Comp. Math. 37* (1978), 63-75.

[4] GRAUERT, H. und R. REMMERT. *Theorie der Steinschen Raüme.* Grund. Der. Math. B.227, Springer-Verlag, 1977.

[5] GUNNING, R. and H. ROSSI. *Analytic Functions of Several Complex Variables.* Prentice-Hall, Englewood Cliffs, N.J., 1965.

[6] SIU, Y.-T. and G. TRAUTMANN. *Gap-Sheaves and Extension of Coherent Analytic Subsheaves.* Springer Lect. Notes Math. 172.

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